Appendix A

(Part 2)

Misc.

- ☒ Turning Movement Counts, 24 Hour Volumes
- ☒ Trip Generation Worksheets
- ☒ Growth Rate and Volume Worksheets
- ☒ HCM Worksheets
- ☒ Queue Length Worksheets (50% Queue Data)
- ☒ Turn Lane Analysis
- ☒ Adjoining Development

(per PennDOT publication ‘Policies and Procedures for Transportation Impact Studies’ dated January 28, 2009.)

Manual Turn Movement Data

151 - 237 Gettysburg Pike

Gettysburg Pike - South Market Street AM

Weather: 40 Clear
Serial # 1610
By: ALPHA

File Name : 01 AM
Site Code : 01
Start Date : 2/20/2020
Page No : 1

Groups Printed- Passenger Veh - Heavy Veh - Bus

	South Market Street From West					South Market Street From East					Gettysburg Pike From South					Gettysburg Pike From North					
Start Time	Left	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Int. Total
06:00 AM	0	24	0	0	24	13	33	4	1	51	4	10	11	6	31	10	2	1	0	13	119
06:15 AM	3	29	2	1	35	8	72	11	4	95	6	4	6	12	28	13	5	0	6	24	182
06:30 AM	3	36	3	0	42	21	88	13	6	128	12	5	17	19	53	8	7	3	0	18	241
06:45 AM	2	47	2	0	51	23	103	14	3	143	18	7	20	14	59	3	1	0	2	6	259
Total	8	136	7	1	152	65	296	42	14	417	40	26	54	51	171	34	15	4	8	61	801
07:00 AM	1	51	5	0	57	28	99	8	2	137	28	13	29	17	87	9	8	6	3	26	307
07:15 AM	8	67	10	2	87	34	135	13	4	186	31	19	45	17	112	8	9	10	8	35	420
07:30 AM	19	83	15	1	118	36	154	11	7	208	24	24	50	32	130	7	10	8	3	28	484
07:45 AM	8	63	16	1	88	53	128	18	10	209	20	18	23	23	84	13	10	9	4	36	417
Total	36	264	46	4	350	151	516	50	23	740	103	74	147	89	413	37	37	33	18	125	1628
08:00 AM	9	77	10	1	97	21	98	12	6	137	6	11	19	9	45	7	8	4	5	24	303
08:15 AM	12	64	7	0	83	28	69	12	2	111	10	15	31	10	66	13	7	3	3	26	286
08:30 AM	6	56	6	0	68	35	78	12	1	126	14	9	30	11	64	14	4	2	0	20	278
08:45 AM	7	40	12	0	59	35	64	13	1	113	7	16	42	5	70	13	10	1	2	26	268
Total	34	237	35	1	307	119	309	49	10	487	37	51	122	35	245	47	29	10	10	96	1135
Grand Total	78	637	88	6	809	335	1121	141	47	1644	180	151	323	175	829	118	81	47	36	282	3564
Apprch %	9.6	78.7	10.9	0.7		20.4	68.2	8.6	2.9		21.7	18.2	39	21.1		41.8	28.7	16.7	12.8		
Total %	2.2	17.9	2.5	0.2	22.7	9.4	31.5	4	1.3	46.1	5.1	4.2	9.1	4.9	23.3	3.3	2.3	1.3	1	7.9	
Passenger Veh	75	596	84	5	760	329	1098	137	46	1610	173	150	320	174	817	118	81	44	35	278	3465
% Passenger Veh	96.2	93.6	95.5	83.3	93.9	98.2	97.9	97.2	97.9	97.9	96.1	99.3	99.1	99.4	98.6	100	100	93.6	97.2	98.6	97.2
Heavy Veh	2	28	0	1	31	6	14	3	1	24	0	1	3	1	5	0	0	0	0	0	60
% Heavy Veh	2.6	4.4	0	16.7	3.8	1.8	1.2	2.1	2.1	1.5	0	0.7	0.9	0.6	0.6	0	0	0	0	0	1.7
Bus	1	13	4	0	18	0	9	1	0	10	7	0	0	0	7	0	0	3	1	4	39
% Bus	1.3	2	4.5	0	2.2	0	0.8	0.7	0	0.6	3.9	0	0	0	0.8	0	0	6.4	2.8	1.4	1.1

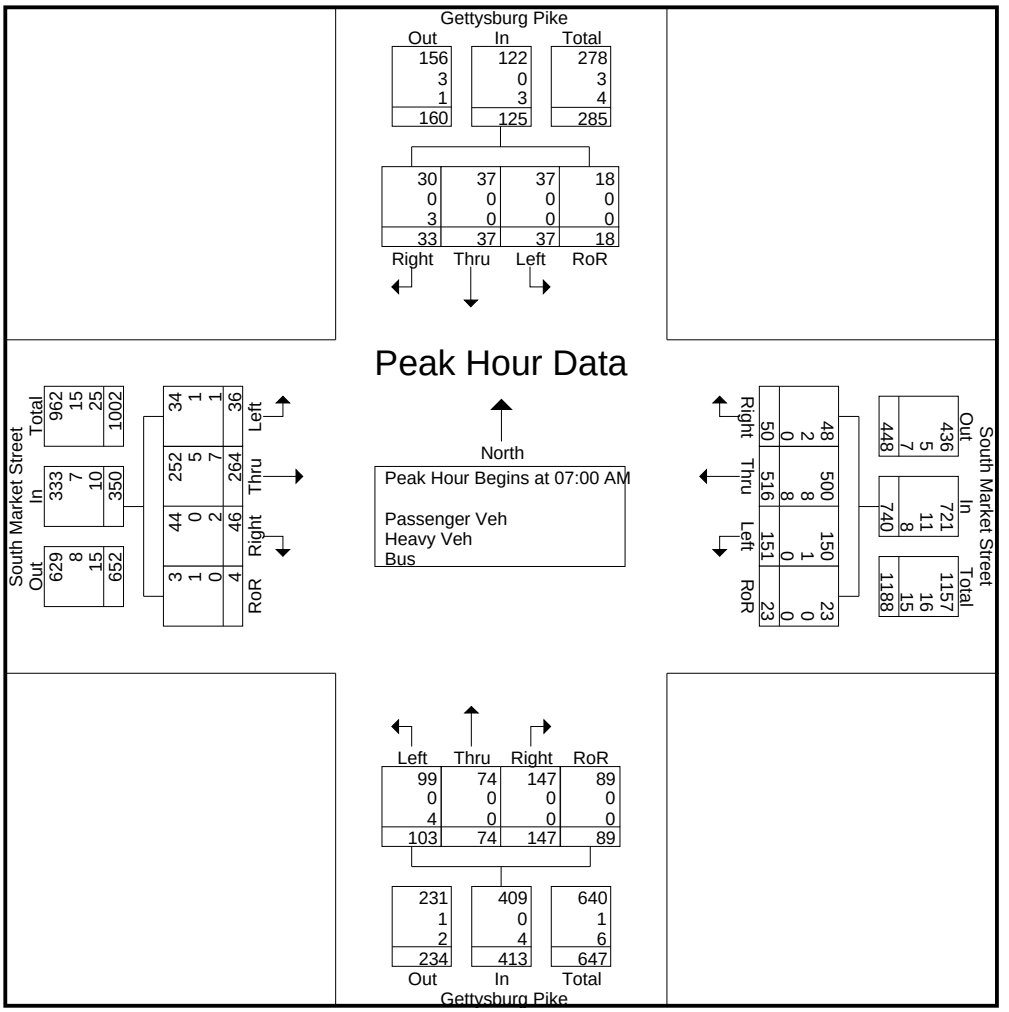
151 - 237 Gettysburg Pike

Gettysburg Pike - South Market Street AM

Weather: 40 Clear
Serial # 1610
By: ALPHA

File Name : 01 AM
Site Code : 01
Start Date : 2/20/2020
Page No : 2

	South Market Street From West					South Market Street From East					Gettysburg Pike From South					Gettysburg Pike From North					
Start Time	Left	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	1	51	5	0	57	28	99	8	2	137	28	13	29	17	87	9	8	6	3	26	307
07:15 AM	8	67	10	**2**	87	34	135	13	4	186	**31**	19	45	17	112	8	9	**10**	**8**	35	420
07:30 AM	**19**	**83**	15	1	**118**	36	**154**	11	7	208	24	**24**	**50**	**32**	**130**	7	**10**	8	3	28	**484**
07:45 AM	8	63	**16**	1	88	**53**	128	**18**	**10**	**209**	20	18	23	23	84	**13**	10	9	4	**36**	417
Total Volume	36	264	46	4	350	151	516	50	23	740	103	74	147	89	413	37	37	33	18	125	1628
% App. Total	10.3	75.4	13.1	1.1		20.4	69.7	6.8	3.1		24.9	17.9	35.6	21.5		29.6	29.6	26.4	14.4		
PHF	.474	.795	.719	.500	.742	.712	.838	.694	.575	.885	.831	.771	.735	.695	.794	.712	.925	.825	.563	.868	.841
Passenger Veh																					
% Passenger Veh	94.4	95.5	95.7	75.0	95.1	99.3	96.9	96.0	100	97.4	96.1	100	100	100	99.0	100	100	90.9	100	97.6	97.4
Heavy Veh	1	5	0	1	7	1	8	2	0	11	0	0	0	0	0	0	0	0	0	0	18
% Heavy Veh																					
Bus	1	7	2	0	10	0	8	0	0	8	4	0	0	0	4	0	0	3	0	3	25
% Bus	2.8	2.7	4.3	0	2.9	0	1.6	0	0	1.1	3.9	0	0	0	1.0	0	0	9.1	0	2.4	1.5



151 - 237 Gettysburg Pike
Gettysburg Pike - South Market Street AM

Weather: 70 Cloudy
Serial # 1601
By: ALPHA

File Name : 01 Oct21 AM
Site Code : 01
Start Date : 10/13/2021
Page No : 1

Groups Printed- Passenger Veh - Heavy Veh - Bus

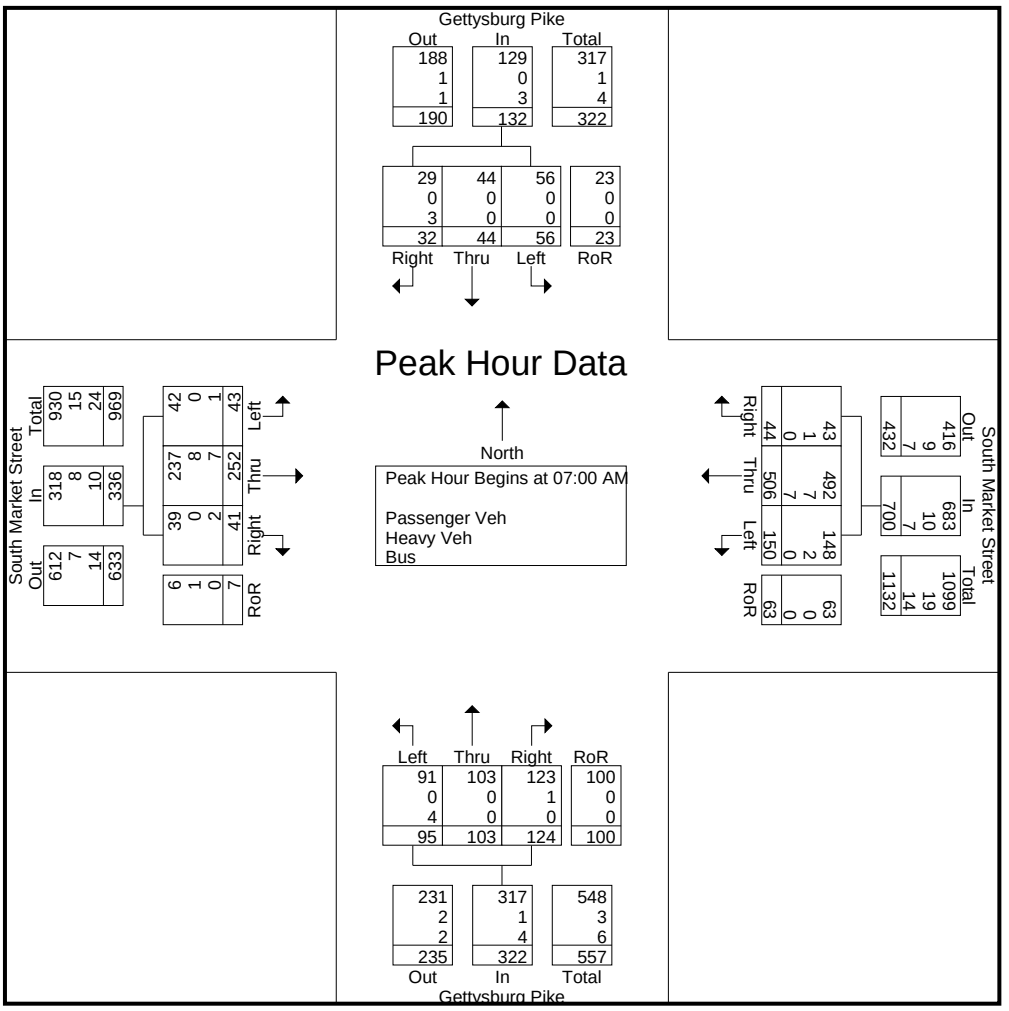
	South Market Street From West					South Market Street From East					Gettysburg Pike From South					Gettysburg Pike From North					
Start Time	Left	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Int. Total
07:00 AM	10	54	7	1	72	32	104	7	21	164	27	44	25	22	118	24	7	6	5	42	396
07:15 AM	12	76	10	2	100	37	141	10	14	202	29	24	40	23	116	12	11	8	7	38	456
07:30 AM	12	65	12	3	92	36	132	12	12	192	20	20	39	30	109	8	12	8	5	33	426
07:45 AM	9	57	12	1	79	45	129	15	16	205	19	15	20	25	79	12	14	10	6	42	405
Total	43	252	41	7	343	150	506	44	63	763	95	103	124	100	422	56	44	32	23	155	1683
Grand Total	43	252	41	7	343	150	506	44	63	763	95	103	124	100	422	56	44	32	23	155	1683
Apprch %	12.5	73.5	12	2		19.7	66.3	5.8	8.3		22.5	24.4	29.4	23.7		36.1	28.4	20.6	14.8		
Total %	2.6	15	2.4	0.4	20.4	8.9	30.1	2.6	3.7	45.3	5.6	6.1	7.4	5.9	25.1	3.3	2.6	1.9	1.4	9.2	
Passenger Veh	42	237	39	6	324	148	492	43	63	746	91	103	123	100	417	56	44	29	23	152	1639
% Passenger Veh	97.7	94	95.1	85.7	94.5	98.7	97.2	97.7	100	97.8	95.8	100	99.2	100	98.8	100	100	90.6	100	98.1	97.4
Heavy Veh	0	8	0	1	9	2	7	1	0	10	0	0	1	0	1	0	0	0	0	0	20
% Heavy Veh	0	3.2	0	14.3	2.6	1.3	1.4	2.3	0	1.3	0	0	0.8	0	0.2	0	0	0	0	0	1.2
Bus	1	7	2	0	10	0	7	0	0	7	4	0	0	0	4	0	0	3	0	3	24
% Bus	2.3	2.8	4.9	0	2.9	0	1.4	0	0	0.9	4.2	0	0	0	0.9	0	0	9.4	0	1.9	1.4

151 - 237 Gettysburg Pike
Gettysburg Pike - South Market Street AM

Weather: 70 Cloudy
Serial # 1601
By: ALPHA

File Name : 01 Oct21 AM
Site Code : 01
Start Date : 10/13/2021
Page No : 2

	South Market Street From West					South Market Street From East					Gettysburg Pike From South					Gettysburg Pike From North					
Start Time	Left	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	10	54	7	1	72	32	104	7	**21**	164	27	**44**	25	22	**118**	**24**	7	6	5	**42**	396
07:15 AM	**12**	**76**	10	2	**100**	37	**141**	10	14	202	**29**	24	**40**	23	116	12	11	8	**7**	38	**456**
07:30 AM	12	65	**12**	**3**	92	36	132	12	12	192	20	20	39	**30**	109	8	12	8	5	33	426
07:45 AM	9	57	12	1	79	**45**	129	**15**	16	**205**	19	15	20	25	79	12	**14**	**10**	6	42	405
Total Volume	43	252	41	7	343	150	506	44	63	763	95	103	124	100	422	56	44	32	23	155	1683
% App. Total	12.5	73.5	12	2		19.7	66.3	5.8	8.3		22.5	24.4	29.4	23.7		36.1	28.4	20.6	14.8		
PHF	.896	.829	.854	.583	.858	.833	.897	.733	.750	.930	.819	.585	.775	.833	.894	.583	.786	.800	.821	.923	.923
Passenger Veh	42	237	39	6	324	148	492	43	63	746	91	103	123	100	417	56	44	29	23	152	1639
% Passenger Veh	97.7	94.0	95.1	85.7	94.5	98.7	97.2	97.7	100	97.8	95.8	100	99.2	100	98.8	100	100	90.6	100	98.1	97.4
Heavy Veh	0	8	0	1	9	2	7	1	0	10	0	0	1	0	1	0	0	0	0	0	20
% Heavy Veh	0	3.2	0	14.3	2.6	1.3	1.4	2.3	0	1.3	0	0	0.8	0	0.2	0	0	0	0	0	1.2
Bus	1	7	2	0	10	0	7	0	0	7	4	0	0	0	4	0	0	3	0	3	24
% Bus	2.3	2.8	4.9	0	2.9	0	1.4	0	0	0.9	4.2	0	0	0	0.9	0	0	9.4	0	1.9	1.4



151 - 237 Gettysburg Pike

Gettysburg Pike - South Market Street PM

Weather: 40 Clear
Serial # 1610
By: ALPHA

File Name : 01 PM
Site Code : 01
Start Date : 2/20/2020
Page No : 1

Groups Printed- Passenger Veh - Heavy Veh - Bus

	South Market St From West					South Market St From East					Gettysburg Pike From South					Gettysburg Pike From North					
Start Time	Left	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Int. Total
03:00 PM	4	94	11	2	111	30	68	18	18	134	18	11	21	19	69	21	19	9	3	52	366
03:15 PM	12	95	14	0	121	46	60	15	8	129	16	10	13	10	49	26	26	6	6	64	363
03:30 PM	9	134	27	0	170	31	66	15	6	118	14	15	30	13	72	35	24	3	8	70	430
03:45 PM	14	104	17	1	136	42	53	18	5	118	14	15	19	15	63	18	17	3	3	41	358
Total	39	427	69	3	538	149	247	66	37	499	62	51	83	57	253	100	86	21	20	227	1517
04:00 PM	14	90	12	0	116	39	70	19	25	153	8	18	17	25	68	28	27	8	3	66	403
04:15 PM	9	110	15	1	135	53	80	18	14	165	12	18	26	17	73	27	24	4	4	59	432
04:30 PM	10	112	14	1	137	42	93	15	14	164	12	11	23	13	59	43	42	10	1	96	456
04:45 PM	17	110	20	0	147	49	57	16	16	138	14	17	28	13	72	25	37	3	4	69	426
Total	50	422	61	2	535	183	300	68	69	620	46	64	94	68	272	123	130	25	12	290	1717
05:00 PM	10	90	11	1	112	51	73	16	18	158	17	19	24	25	85	26	14	5	4	49	404
05:15 PM	12	93	12	1	118	59	74	13	21	167	11	21	31	9	72	25	32	8	2	67	424
05:30 PM	10	78	15	0	103	49	100	17	19	185	12	16	22	15	65	28	24	4	5	61	414
05:45 PM	8	101	13	0	122	50	56	20	23	149	10	10	19	10	49	43	39	5	5	92	412
Total	40	362	51	2	455	209	303	66	81	659	50	66	96	59	271	122	109	22	16	269	1654
Grand Total	129	1211	181	7	1528	541	850	200	187	1778	158	181	273	184	796	345	325	68	48	786	4888
Apprch %	8.4	79.3	11.8	0.5		30.4	47.8	11.2	10.5		19.8	22.7	34.3	23.1		43.9	41.3	8.7	6.1		
Total %	2.6	24.8	3.7	0.1	31.3	11.1	17.4	4.1	3.8	36.4	3.2	3.7	5.6	3.8	16.3	7.1	6.6	1.4	1	16.1	
Passenger Veh	128	1183	175	7	1493	540	832	196	187	1755	152	181	269	183	785	345	325	66	46	782	4815
% Passenger Veh	99.2	97.7	96.7	100	97.7	99.8	97.9	98	100	98.7	96.2	100	98.5	99.5	98.6	100	100	97.1	95.8	99.5	98.5
Heavy Veh	0	22	3	0	25	0	8	1	0	9	0	0	4	1	5	0	0	0	0	0	39
% Heavy Veh	0	1.8	1.7	0	1.6	0	0.9	0.5	0	0.5	0	0	1.5	0.5	0.6	0	0	0	0	0	0.8
Bus	1	6	3	0	10	1	10	3	0	14	6	0	0	0	6	0	0	2	2	4	34
% Bus	0.8	0.5	1.7	0	0.7	0.2	1.2	1.5	0	0.8	3.8	0	0	0	0.8	0	0	2.9	4.2	0.5	0.7

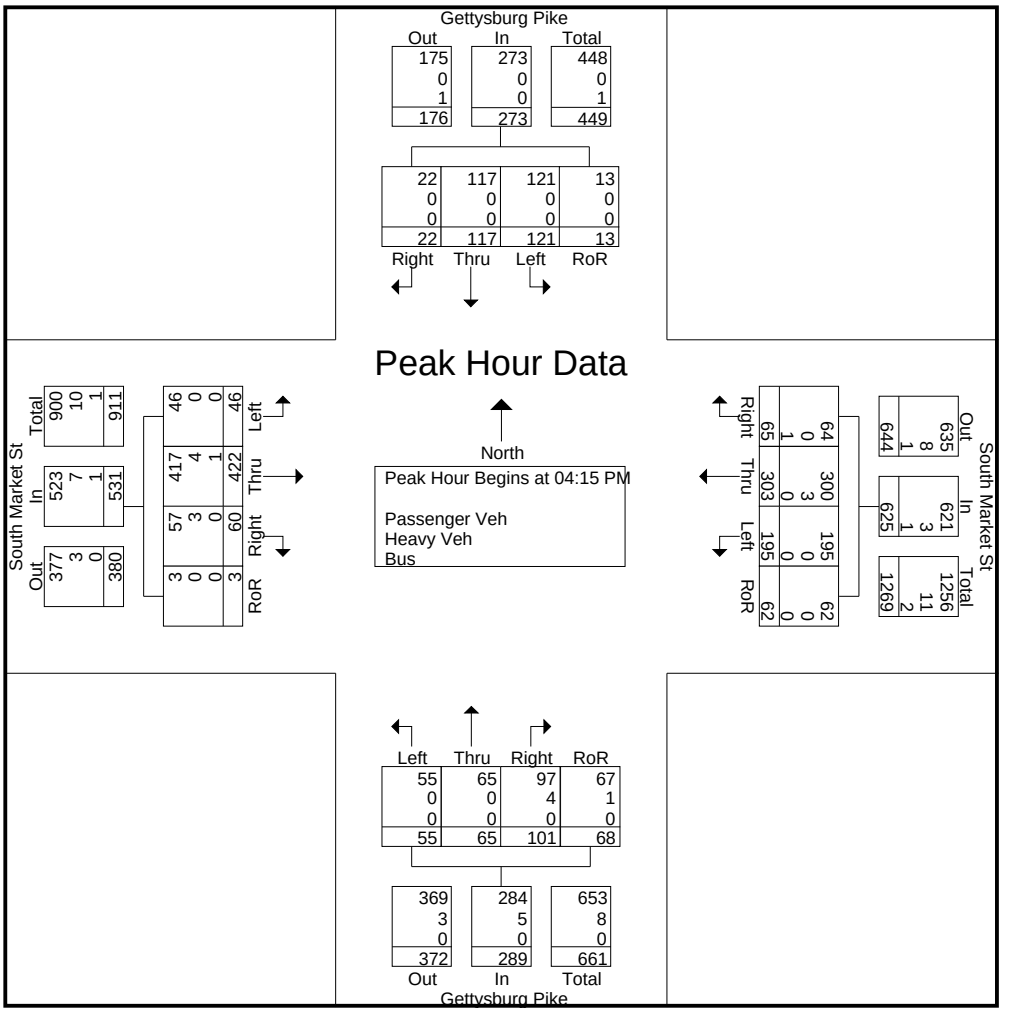
151 - 237 Gettysburg Pike

Gettysburg Pike - South Market Street PM

Weather: 40 Clear
Serial # 1610
By: ALPHA

File Name : 01 PM
Site Code : 01
Start Date : 2/20/2020
Page No : 2

	South Market St From West					South Market St From East					Gettysburg Pike From South					Gettysburg Pike From North					
Start Time	Left	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	9	110	15	**1**	135	**53**	80	**18**	14	**165**	12	18	26	17	73	27	24	4	**4**	59	432
04:30 PM	10	**112**	14	1	137	42	**93**	15	14	164	12	11	23	13	59	**43**	**42**	**10**	1	**96**	**456**
04:45 PM	**17**	110	**20**	0	**147**	49	57	16	16	138	14	17	**28**	13	72	25	37	3	4	69	426
05:00 PM	10	90	11	1	112	51	73	16	**18**	158	**17**	**19**	24	**25**	**85**	26	14	5	4	49	404
Total Volume	46	422	60	3	531	195	303	65	62	625	55	65	101	68	289	121	117	22	13	273	1718
% App. Total	8.7	79.5	11.3	0.6		31.2	48.5	10.4	9.9		19	22.5	34.9	23.5		44.3	42.9	8.1	4.8		
PHF	.676	.942	.750	.750	.903	.920	.815	.903	.861	.947	.809	.855	.902	.680	.850	.703	.696	.550	.813	.711	.942
Passenger Veh																					
% Passenger Veh	100	98.8	95.0	100	98.5	100	99.0	98.5	100	99.4	100	100	96.0	98.5	98.3	100	100	100	100	100	99.0
Heavy Veh	0	4	3	0	7	0	3	0	0	3	0	0	4	1	5	0	0	0	0	0	15
% Heavy Veh																					
Bus	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
% Bus	0	0.2	0	0	0.2	0	0	1.5	0	0.2	0	0	0	0	0	0	0	0	0	0	0.1



151 - 237 Gettysburg Pike

Gettysburg Pike - South Market Street Saturday

Weather: 40 Clear
Serial # 1610
By: ALPHA

File Name : 01 SA
Site Code : 01
Start Date : 2/22/2020
Page No : 1

Groups Printed- Passenger Veh - Heavy Veh - Bus

	South Market St From West					South Market St From East					Gettysburg Pike From South					Gettysburg Pike From North					
Start Time	Left	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Int. Total
10:00 AM	5	60	6	1	72	16	72	13	13	114	15	17	17	13	62	16	19	2	1	38	286
10:15 AM	6	46	7	2	61	18	72	18	16	124	12	16	11	15	54	21	19	3	3	46	285
10:30 AM	10	65	6	3	84	16	65	20	12	113	18	14	18	15	65	26	16	2	5	49	311
10:45 AM	10	55	4	2	71	19	89	23	19	150	20	14	16	10	60	27	24	5	2	58	339
Total	31	226	23	8	288	69	298	74	60	501	65	61	62	53	241	90	78	12	11	191	1221
11:00 AM	4	76	8	6	94	30	72	11	7	120	15	12	13	13	53	22	18	6	2	48	315
11:15 AM	5	61	4	1	71	42	69	16	19	146	9	18	15	10	52	24	18	4	1	47	316
11:30 AM	2	77	9	3	91	18	93	21	20	152	13	19	17	12	61	25	22	4	4	55	359
11:45 AM	12	69	9	5	95	20	94	13	14	141	17	10	22	12	61	33	22	8	1	64	361
Total	23	283	30	15	351	110	328	61	60	559	54	59	67	47	227	104	80	22	8	214	1351
12:00 PM	8	69	6	1	84	18	70	14	9	111	10	17	15	12	54	25	19	4	5	53	302
12:15 PM	6	81	9	4	100	24	73	13	14	124	16	15	16	11	58	31	20	4	4	59	341
12:30 PM	5	67	5	0	77	23	55	15	10	103	12	19	14	18	63	31	9	7	1	48	291
12:45 PM	8	53	14	6	81	30	80	16	14	140	15	15	17	9	56	27	21	5	1	54	331
Total	27	270	34	11	342	95	278	58	47	478	53	66	62	50	231	114	69	20	11	214	1265
01:00 PM	4	76	6	0	86	28	72	13	9	122	6	16	15	13	50	35	26	3	4	68	326
01:15 PM	9	97	7	3	116	36	60	12	5	113	15	13	17	5	50	20	24	4	1	49	328
01:30 PM	5	66	8	2	81	20	66	11	6	103	15	16	21	16	68	24	28	3	0	55	307
01:45 PM	7	57	4	1	69	29	67	10	13	119	6	10	20	12	48	24	22	5	6	57	293
Total	25	296	25	6	352	113	265	46	33	457	42	55	73	46	216	103	100	15	11	229	1254
Grand Total	106	1075	112	40	1333	387	1169	239	200	1995	214	241	264	196	915	411	327	69	41	848	5091
Apprch %	8	80.6	8.4	3		19.4	58.6	12	10		23.4	26.3	28.9	21.4		48.5	38.6	8.1	4.8		
Total %	2.1	21.1	2.2	0.8	26.2	7.6	23	4.7	3.9	39.2	4.2	4.7	5.2	3.8	18	8.1	6.4	1.4	0.8	16.7	
Passenger Veh	106	1074	112	40	1332	387	1162	239	200	1988	214	241	263	196	914	411	326	69	41	847	5081
% Passenger Veh	100	99.9	100	100	99.9	100	99.4	100	100	99.6	100	100	99.6	100	99.9	100	99.7	100	100	99.9	99.8
Heavy Veh	0	1	0	0	1	0	7	0	0	7	0	0	0	0	0	0	1	0	0	1	9
% Heavy Veh	0	0.1	0	0	0.1	0	0.6	0	0	0.4	0	0	0	0	0	0	0.3	0	0	0.1	0.2
Bus	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
% Bus	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0.1	0	0	0	0	0	0

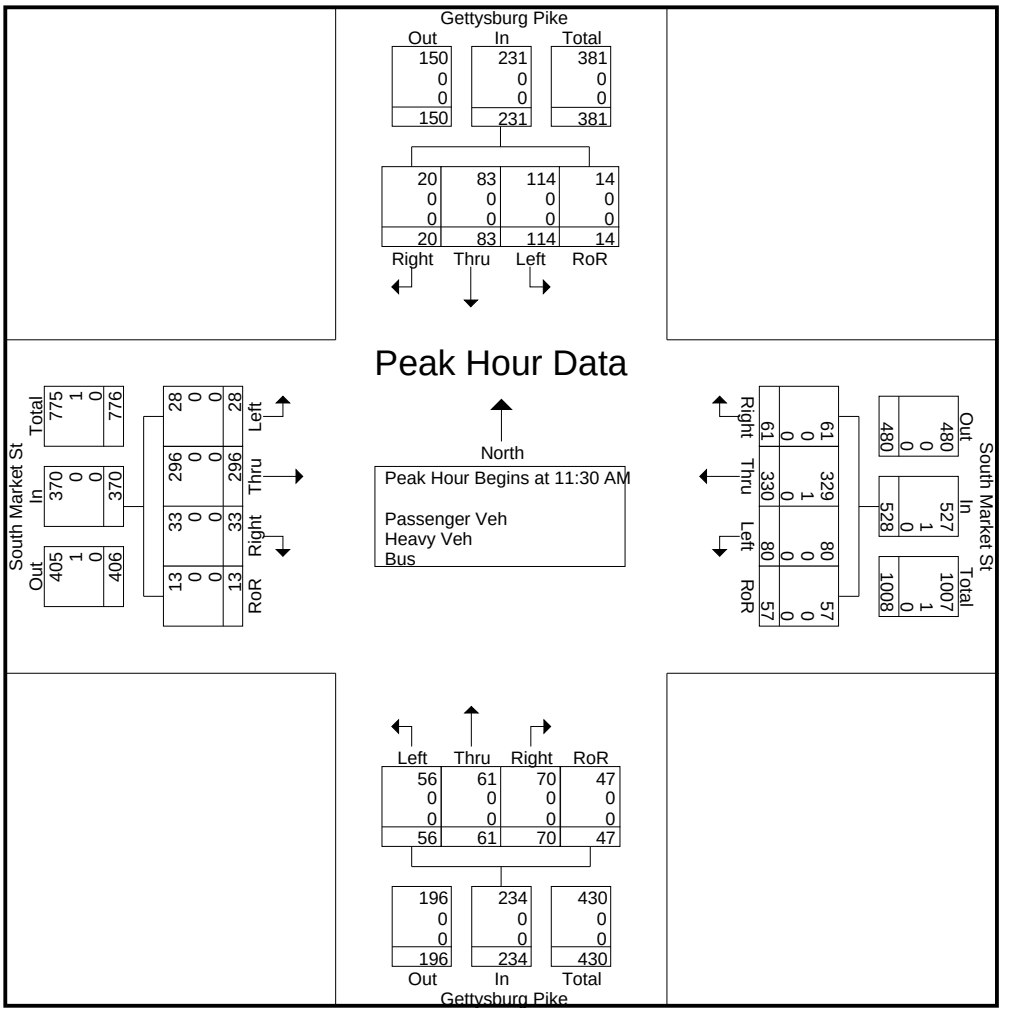
151 - 237 Gettysburg Pike

Gettysburg Pike - South Market Street Saturday

Weather: 40 Clear
Serial # 1610
By: ALPHA

File Name : 01 SA
Site Code : 01
Start Date : 2/22/2020
Page No : 2

	South Market St From West					South Market St From East					Gettysburg Pike From South					Gettysburg Pike From North					
Start Time	Left	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Int. Total
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:30 AM																					
11:30 AM	2	77	**9**	3	91	18	93	**21**	**20**	**152**	13	**19**	17	**12**	**61**	25	**22**	4	4	55	359
11:45 AM	**12**	69	9	**5**	95	20	**94**	13	14	141	**17**	10	**22**	12	61	**33**	22	**8**	1	**64**	**361**
12:00 PM	8	69	6	1	84	18	70	14	9	111	10	17	15	12	54	25	19	4	**5**	53	302
12:15 PM	6	**81**	9	4	**100**	**24**	73	13	14	124	16	15	16	11	58	31	20	4	4	59	341
Total Volume	28	296	33	13	370	80	330	61	57	528	56	61	70	47	234	114	83	20	14	231	1363
% App. Total	7.6	80	8.9	3.5		15.2	62.5	11.6	10.8		23.9	26.1	29.9	20.1		49.4	35.9	8.7	6.1		
PHF	.583	.914	.917	.650	.925	.833	.878	.726	.713	.868	.824	.803	.795	.979	.959	.864	.943	.625	.700	.902	.944
Passenger Veh																					
% Passenger Veh	100	100	100	100	100	100	99.7	100	100	99.8	100	100	100	100	100	100	100	100	100	100	99.9
Heavy Veh	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
% Heavy Veh																					
Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



151 - 237 Gettysburg Pike

US 15 Southbound OFF Ramp - South Market Street AM

Weather: 40 Clear
Serial # 1610
By: ALPHA

File Name : 02 AM
Site Code : 02
Start Date : 2/20/2020
Page No : 1

Groups Printed- Passenger Veh - Heavy Veh - Bus

	South Market St From West				South Market St From East			US 15 SB OFF Ramp From North					
Start Time	Thru	Right	RoR	App. Total	Left	Thru	App. Total	Left	Thru	Right	RoR	App. Total	Int. Total
06:00 AM	37	7	5	49	6	38	44	15	0	6	2	23	116
06:15 AM	41	14	7	62	6	75	81	21	0	11	4	36	179
06:30 AM	54	15	10	79	11	97	108	23	0	18	7	48	235
06:45 AM	68	8	11	87	12	120	132	36	0	15	5	56	275
Total	200	44	33	277	35	330	365	95	0	50	18	163	805
07:00 AM	88	8	8	104	9	106	115	21	0	15	12	48	267
07:15 AM	110	16	12	138	18	159	177	31	0	18	15	64	379
07:30 AM	149	12	15	176	12	152	164	38	0	28	18	84	424
07:45 AM	102	10	11	123	14	169	183	56	0	23	16	95	401
Total	449	46	46	541	53	586	639	146	0	84	61	291	1471
08:00 AM	88	8	7	103	2	108	110	38	0	22	9	69	282
08:15 AM	104	8	13	125	9	73	82	27	0	23	20	70	277
08:30 AM	103	10	5	118	13	92	105	41	0	17	10	68	291
08:45 AM	82	8	7	97	5	73	78	31	0	22	10	63	238
Total	377	34	32	443	29	346	375	137	0	84	49	270	1088
Grand Total	1026	124	111	1261	117	1262	1379	378	0	218	128	724	3364
Apprch %	81.4	9.8	8.8		8.5	91.5		52.2	0	30.1	17.7		
Total %	30.5	3.7	3.3	37.5	3.5	37.5	41	11.2	0	6.5	3.8	21.5	
Passenger Veh	981	114	111	1206	115	1229	1344	368	0	203	128	699	3249
% Passenger Veh	95.6	91.9	100	95.6	98.3	97.4	97.5	97.4	0	93.1	100	96.5	96.6
Heavy Veh	33	8	0	41	2	27	29	8	0	15	0	23	93
% Heavy Veh	3.2	6.5	0	3.3	1.7	2.1	2.1	2.1	0	6.9	0	3.2	2.8
Bus	12	2	0	14	0	6	6	2	0	0	0	2	22
% Bus	1.2	1.6	0	1.1	0	0.5	0.4	0.5	0	0	0	0.3	0.7

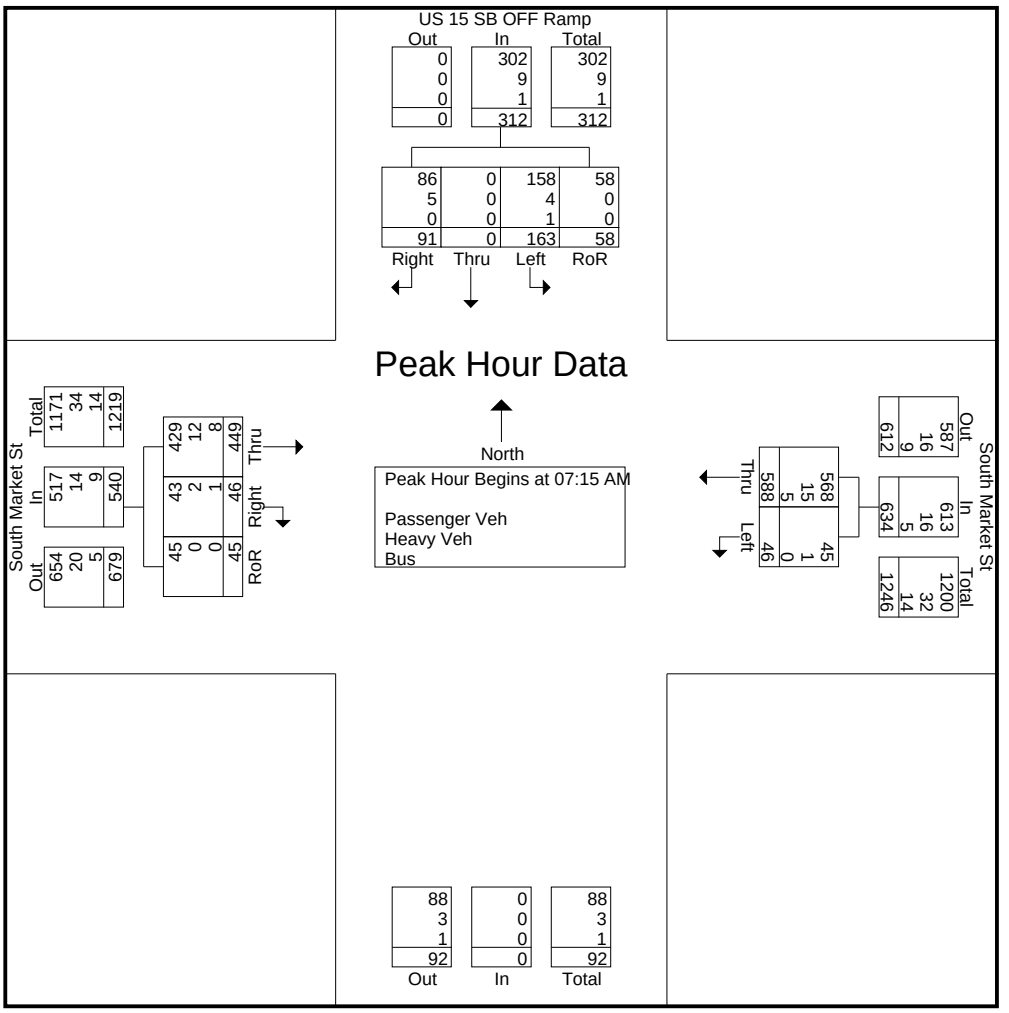
151 - 237 Gettysburg Pike

US 15 Southbound OFF Ramp - South Market Street AM

Weather: 40 Clear
Serial # 1610
By: ALPHA

File Name : 02 AM
Site Code : 02
Start Date : 2/20/2020
Page No : 2

	South Market St From West				South Market St From East			US 15 SB OFF Ramp From North					
Start Time	Thru	Right	RoR	App. Total	Left	Thru	App. Total	Left	Thru	Right	RoR	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	110	**16**	12	138	**18**	159	177	31	0	18	15	64	379
07:30 AM	**149**	12	**15**	**176**	12	152	164	38	0	**28**	**18**	84	**424**
07:45 AM	102	10	11	123	14	**169**	**183**	**56**	0	23	16	**95**	401
08:00 AM	88	8	7	103	2	108	110	38	0	22	9	69	282
Total Volume	449	46	45	540	46	588	634	163	0	91	58	312	1486
% App. Total	83.1	8.5	8.3		7.3	92.7		52.2	0	29.2	18.6		
PHF	.753	.719	.750	.767	.639	.870	.866	.728	.000	.813	.806	.821	.876
Passenger Veh	429	43	45	517	45	568	613	158	0	86	58	302	1432
% Passenger Veh	95.5	93.5	100	95.7	97.8	96.6	96.7	96.9	0	94.5	100	96.8	96.4
Heavy Veh	12	2	0	14	1	15	16	4	0	5	0	9	39
% Heavy Veh	2.7	4.3	0	2.6	2.2	2.6	2.5	2.5	0	5.5	0	2.9	2.6
Bus	8	1	0	9	0	5	5	1	0	0	0	1	15
% Bus	1.8	2.2	0	1.7	0	0.9	0.8	0.6	0	0	0	0.3	1.0



151 - 237 Gettysburg Pike

US 15 Southbound OFF Ramp - South Market Street PM

Weather: 40 Clear
Serial # 1610
By: ALPHA

File Name : 02 PM
Site Code : 02
Start Date : 2/20/2020
Page No : 1

Groups Printed- Passenger Veh - Heavy Veh - Bus

	South Market St From West				South Market St From East			US 15 SB OFF Ramp From North					
Start Time	Thru	Right	RoR	App. Total	Left	Thru	App. Total	Left	Thru	Right	RoR	App. Total	Int. Total
03:00 PM	143	12	11	166	21	89	110	86	0	20	25	131	407
03:15 PM	112	14	10	136	20	81	101	97	0	23	24	144	381
03:30 PM	190	14	17	221	16	79	95	103	0	22	11	136	452
03:45 PM	128	11	8	147	12	82	94	69	0	18	16	103	344
Total	573	51	46	670	69	331	400	355	0	83	76	514	1584
04:00 PM	135	16	10	161	26	111	137	98	0	23	22	143	441
04:15 PM	158	14	12	184	23	120	143	122	0	23	25	170	497
04:30 PM	154	19	21	194	19	106	125	88	0	26	22	136	455
04:45 PM	128	33	18	179	12	82	94	72	0	29	23	124	397
Total	575	82	61	718	80	419	499	380	0	101	92	573	1790
05:00 PM	116	27	10	153	11	97	108	62	0	28	20	110	371
05:15 PM	134	13	15	162	17	122	139	144	0	26	20	190	491
05:30 PM	120	9	12	141	18	135	153	111	0	33	19	163	457
05:45 PM	120	21	17	158	11	108	119	55	0	25	13	93	370
Total	490	70	54	614	57	462	519	372	0	112	72	556	1689
Grand Total	1638	203	161	2002	206	1212	1418	1107	0	296	240	1643	5063
Apprch %	81.8	10.1	8		14.5	85.5		67.4	0	18	14.6		
Total %	32.4	4	3.2	39.5	4.1	23.9	28	21.9	0	5.8	4.7	32.5	
Passenger Veh	1600	196	161	1957	206	1188	1394	1093	0	290	238	1621	4972
% Passenger Veh	97.7	96.6	100	97.8	100	98	98.3	98.7	0	98	99.2	98.7	98.2
Heavy Veh	32	7	0	39	0	13	13	6	0	4	2	12	64
% Heavy Veh	2	3.4	0	1.9	0	1.1	0.9	0.5	0	1.4	0.8	0.7	1.3
Bus	6	0	0	6	0	11	11	8	0	2	0	10	27
% Bus	0.4	0	0	0.3	0	0.9	0.8	0.7	0	0.7	0	0.6	0.5

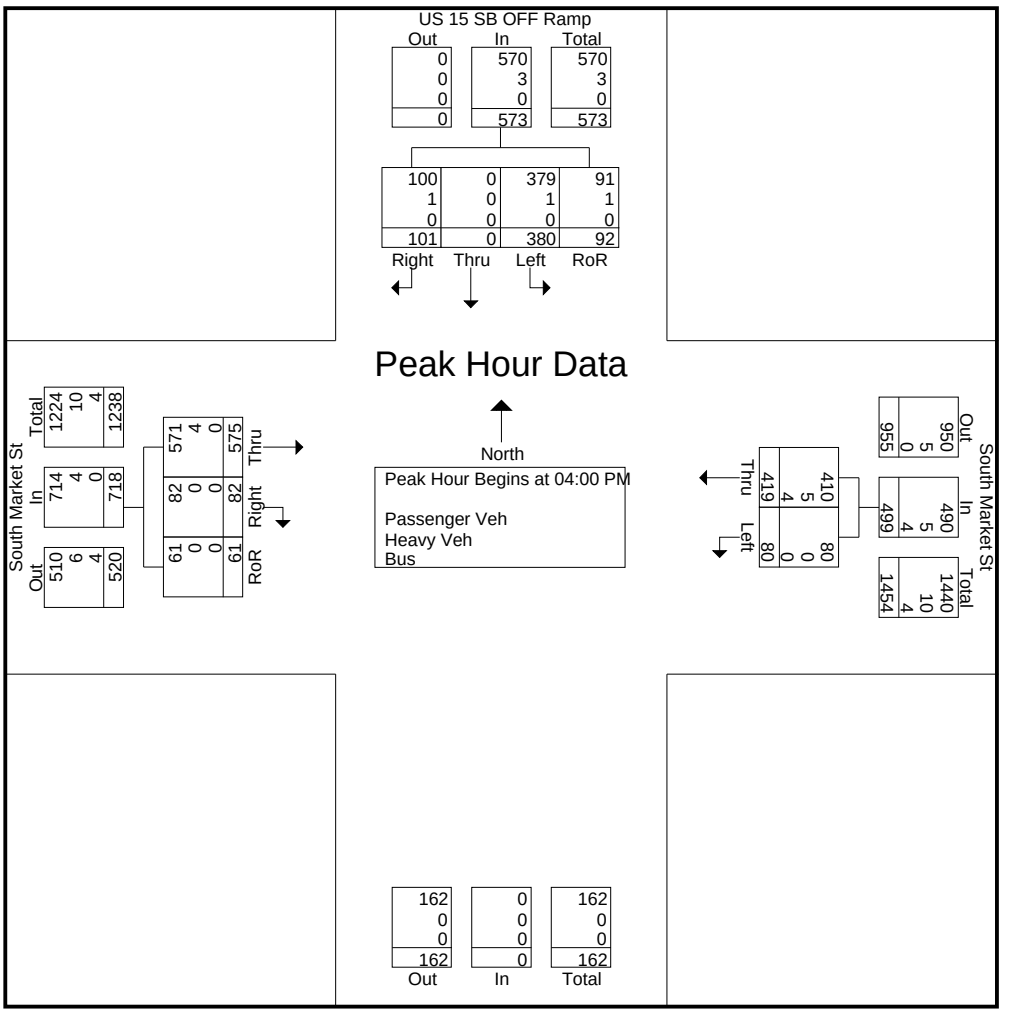
151 - 237 Gettysburg Pike

US 15 Southbound OFF Ramp - South Market Street PM

Weather: 40 Clear
Serial # 1610
By: ALPHA

File Name : 02 PM
Site Code : 02
Start Date : 2/20/2020
Page No : 2

	South Market St From West				South Market St From East			US 15 SB OFF Ramp From North					
Start Time	Thru	Right	RoR	App. Total	Left	Thru	App. Total	Left	Thru	Right	RoR	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	135	16	10	161	**26**	111	137	98	0	23	22	143	441
04:15 PM	**158**	14	12	184	23	**120**	**143**	**122**	0	23	**25**	**170**	**497**
04:30 PM	154	19	**21**	**194**	19	106	125	88	0	26	22	136	455
04:45 PM	128	**33**	18	179	12	82	94	72	0	**29**	23	124	397
Total Volume	575	82	61	718	80	419	499	380	0	101	92	573	1790
% App. Total	80.1	11.4	8.5		16	84		66.3	0	17.6	16.1		
PHF	.910	.621	.726	.925	.769	.873	.872	.779	.000	.871	.920	.843	.900
Passenger Veh	571	82	61	714	80	410	490	379	0	100	91	570	1774
% Passenger Veh	99.3	100	100	99.4	100	97.9	98.2	99.7	0	99.0	98.9	99.5	99.1
Heavy Veh	4	0	0	4	0	5	5	1	0	1	1	3	12
% Heavy Veh	0.7	0	0	0.6	0	1.2	1.0	0.3	0	1.0	1.1	0.5	0.7
Bus	0	0	0	0	0	4	4	0	0	0	0	0	4
% Bus	0	0	0	0	0	1.0	0.8	0	0	0	0	0	0.2



151 - 237 Gettysburg Pike

US 15 Southbound OFF Ramp - South Market Street Saturday

Weather: 40 Clear
Serial # 1610
By: ALPHA

File Name : 02 SA
Site Code : 02
Start Date : 2/22/2020
Page No : 1

Groups Printed- Passenger Veh - Heavy Veh - Bus

	South Market St From West				South Market St From East			US 15 SB OFF Ramp From North					
Start Time	Thru	Right	RoR	App. Total	Left	Thru	App. Total	Left	Thru	Right	RoR	App. Total	Int. Total
10:00 AM	97	9	3	109	5	96	101	14	0	15	5	34	244
10:15 AM	82	8	2	92	8	103	111	52	0	14	4	70	273
10:30 AM	110	13	5	128	5	98	103	43	0	13	6	62	293
10:45 AM	99	6	2	107	4	122	126	20	1	15	9	45	278
Total	388	36	12	436	22	419	441	129	1	57	24	211	1088
11:00 AM	105	12	3	120	8	110	118	12	0	10	3	25	263
11:15 AM	89	11	6	106	7	128	135	49	0	12	5	66	307
11:30 AM	125	7	1	133	25	130	155	41	0	18	7	66	354
11:45 AM	125	9	5	139	12	124	136	39	0	12	5	56	331
Total	444	39	15	498	52	492	544	141	0	52	20	213	1255
12:00 PM	115	6	1	122	22	98	120	45	2	9	2	58	300
12:15 PM	110	19	8	137	15	103	118	12	0	13	3	28	283
12:30 PM	120	10	3	133	39	97	136	16	0	8	5	29	298
12:45 PM	102	2	0	104	17	125	142	48	0	11	2	61	307
Total	447	37	12	496	93	423	516	121	2	41	12	176	1188
01:00 PM	127	7	1	135	6	105	111	44	1	15	7	67	313
01:15 PM	125	12	4	141	6	94	100	48	0	15	3	66	307
01:30 PM	118	3	2	123	6	99	105	37	0	6	2	45	273
01:45 PM	109	6	1	116	4	87	91	32	0	19	8	59	266
Total	479	28	8	515	22	385	407	161	1	55	20	237	1159
Grand Total	1758	140	47	1945	189	1719	1908	552	4	205	76	837	4690
Apprch %	90.4	7.2	2.4		9.9	90.1		65.9	0.5	24.5	9.1		
Total %	37.5	3	1	41.5	4	36.7	40.7	11.8	0.1	4.4	1.6	17.8	
Passenger Veh	1748	137	47	1932	188	1708	1896	546	4	201	76	827	4655
% Passenger Veh	99.4	97.9	100	99.3	99.5	99.4	99.4	98.9	100	98	100	98.8	99.3
Heavy Veh	9	3	0	12	1	11	12	4	0	4	0	8	32
% Heavy Veh	0.5	2.1	0	0.6	0.5	0.6	0.6	0.7	0	2	0	1	0.7
Bus	1	0	0	1	0	0	0	2	0	0	0	2	3
% Bus	0.1	0	0	0.1	0	0	0	0.4	0	0	0	0.2	0.1

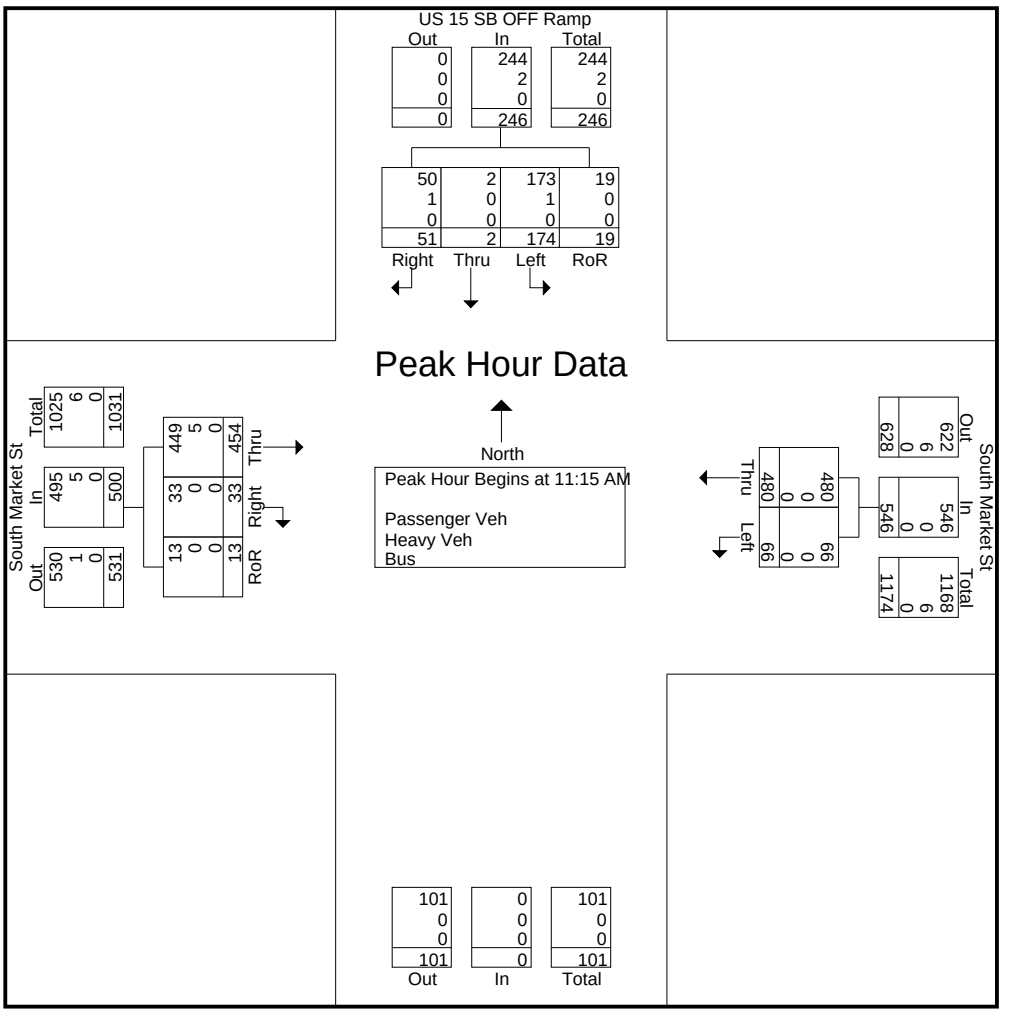
151 - 237 Gettysburg Pike

US 15 Southbound OFF Ramp - South Market Street Saturday

Weather: 40 Clear
Serial # 1610
By: ALPHA

File Name : 02 SA
Site Code : 02
Start Date : 2/22/2020
Page No : 2

	South Market St From West				South Market St From East			US 15 SB OFF Ramp From North					
Start Time	Thru	Right	RoR	App. Total	Left	Thru	App. Total	Left	Thru	Right	RoR	App. Total	Int. Total
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 11:15 AM													
11:15 AM	89	**11**	**6**	106	7	128	135	**49**	0	12	5	**66**	307
11:30 AM	**125**	7	1	133	**25**	**130**	**155**	41	0	**18**	**7**	66	**354**
11:45 AM	125	9	5	**139**	12	124	136	39	0	12	5	56	331
12:00 PM	115	6	1	122	22	98	120	45	**2**	9	2	58	300
Total Volume	454	33	13	500	66	480	546	174	2	51	19	246	1292
% App. Total	90.8	6.6	2.6		12.1	87.9		70.7	0.8	20.7	7.7		
PHF	.908	.750	.542	.899	.660	.923	.881	.888	.250	.708	.679	.932	.912
Passenger Veh	449	33	13	495	66	480	546	173	2	50	19	244	1285
% Passenger Veh	98.9	100	100	99.0	100	100	100	99.4	100	98.0	100	99.2	99.5
Heavy Veh	5	0	0	5	0	0	0	1	0	1	0	2	7
% Heavy Veh	1.1	0	0	1.0	0	0	0	0.6	0	2.0	0	0.8	0.5
Bus	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bus	0	0	0	0	0	0	0	0	0	0	0	0	0



151 - 237 Gettysburg Pike

US 15 Northbound OFF Ramp - South Market Street AM

Weather: 40 Clear
Serial # 1601
By: ALPHA

File Name : 03 AM
Site Code : 03
Start Date : 2/20/2020
Page No : 1

Groups Printed- Passenger Veh - Heavy Veh - Bus

	South Market St From West			South Market St From East				US 15 NB OFF Ramp From South					
Start Time	Left	Thru	App. Total	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Int. Total
06:00 AM	37	14	51	33	15	12	60	13	0	15	4	32	143
06:15 AM	55	9	64	52	22	10	84	25	0	16	6	47	195
06:30 AM	45	30	75	86	25	19	130	26	0	12	4	42	247
06:45 AM	77	33	110	100	40	22	162	34	0	18	9	61	333
Total	214	86	300	271	102	63	436	98	0	61	23	182	918
07:00 AM	66	43	109	92	22	16	130	19	0	14	4	37	276
07:15 AM	88	50	138	140	39	35	214	36	0	9	3	48	400
07:30 AM	130	59	189	113	48	15	176	45	0	21	7	73	438
07:45 AM	115	45	160	122	54	24	200	47	1	27	6	81	441
Total	399	197	596	467	163	90	720	147	1	71	20	239	1555
08:00 AM	98	30	128	75	38	14	127	28	0	27	8	63	318
08:15 AM	78	49	127	58	26	12	96	17	2	20	7	46	269
08:30 AM	89	58	147	66	22	8	96	22	2	20	4	48	291
08:45 AM	79	35	114	47	14	11	72	18	0	13	5	36	222
Total	344	172	516	246	100	45	391	85	4	80	24	193	1100
Grand Total	957	455	1412	984	365	198	1547	330	5	212	67	614	3573
Apprch %	67.8	32.2		63.6	23.6	12.8		53.7	0.8	34.5	10.9		
Total %	26.8	12.7	39.5	27.5	10.2	5.5	43.3	9.2	0.1	5.9	1.9	17.2	
Passenger Veh	926	433	1359	969	365	198	1532	311	5	207	67	590	3481
% Passenger Veh	96.8	95.2	96.2	98.5	100	100	99	94.2	100	97.6	100	96.1	97.4
Heavy Veh	31	10	41	8	0	0	8	19	0	5	0	24	73
% Heavy Veh	3.2	2.2	2.9	0.8	0	0	0.5	5.8	0	2.4	0	3.9	2
Bus	0	12	12	7	0	0	7	0	0	0	0	0	19
% Bus	0	2.6	0.8	0.7	0	0	0.5	0	0	0	0	0	0.5

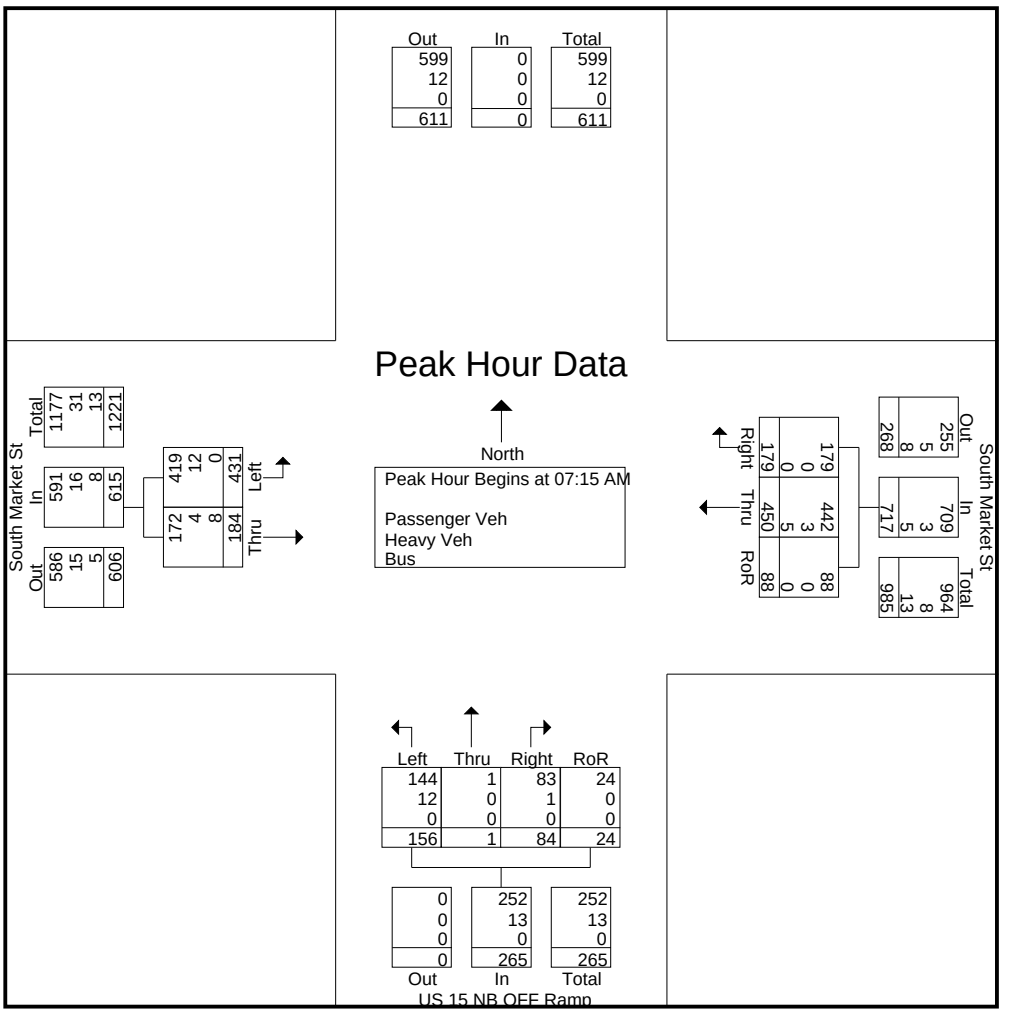
151 - 237 Gettysburg Pike

US 15 Northbound OFF Ramp - South Market Street AM

Weather: 40 Clear
Serial # 1601
By: ALPHA

File Name : 03 AM
Site Code : 03
Start Date : 2/20/2020
Page No : 2

	South Market St From West			South Market St From East				US 15 NB OFF Ramp From South					
Start Time	Left	Thru	App. Total	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	88	50	138	**140**	39	**35**	**214**	36	0	9	3	48	400
07:30 AM	**130**	**59**	**189**	113	48	15	176	45	0	21	7	73	438
07:45 AM	115	45	160	122	**54**	24	200	**47**	**1**	**27**	6	**81**	**441**
08:00 AM	98	30	128	75	38	14	127	28	0	27	**8**	63	318
Total Volume	431	184	615	450	179	88	717	156	1	84	24	265	1597
% App. Total	70.1	29.9		62.8	25	12.3		58.9	0.4	31.7	9.1		
PHF	.829	.780	.813	.804	.829	.629	.838	.830	.250	.778	.750	.818	.905
Passenger Veh	419	172	591	442	179	88	709	144	1	83	24	252	1552
% Passenger Veh	97.2	93.5	96.1	98.2	100	100	98.9	92.3	100	98.8	100	95.1	97.2
Heavy Veh	12	4	16	3	0	0	3	12	0	1	0	13	32
% Heavy Veh	2.8	2.2	2.6	0.7	0	0	0.4	7.7	0	1.2	0	4.9	2.0
Bus	0	8	8	5	0	0	5	0	0	0	0	0	13
% Bus	0	4.3	1.3	1.1	0	0	0.7	0	0	0	0	0	0.8



151 - 237 Gettysburg Pike

US 15 Northbound OFF Ramp - South Market Street PM

Weather: 40 Clear
Serial # 1601
By: ALPHA

File Name : 03 PM
Site Code : 03
Start Date : 2/20/2020
Page No : 1

Groups Printed- Passenger Veh - Heavy Veh - Bus

	South Market St From West			South Market St From East				US 15 NB OFF Ramp From South					
Start Time	Left	Thru	App. Total	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Int. Total
03:00 PM	133	94	227	70	20	8	98	33	0	12	13	58	383
03:15 PM	105	98	203	82	19	4	105	25	0	20	12	57	365
03:30 PM	177	120	297	76	29	7	112	26	1	10	2	39	448
03:45 PM	140	53	193	70	20	5	95	34	0	13	5	52	340
Total	555	365	920	298	88	24	410	118	1	55	32	206	1536
04:00 PM	122	120	242	92	26	6	124	40	0	8	6	54	420
04:15 PM	175	110	285	91	33	13	137	52	0	19	6	77	499
04:30 PM	130	109	239	83	39	9	131	45	0	17	4	66	436
04:45 PM	115	80	195	67	21	12	100	37	0	21	10	68	363
Total	542	419	961	333	119	40	492	174	0	65	26	265	1718
05:00 PM	90	95	185	73	28	14	115	29	1	16	12	58	358
05:15 PM	118	158	276	108	33	19	160	22	0	24	9	55	491
05:30 PM	99	128	227	132	31	13	176	25	0	18	4	47	450
05:45 PM	99	84	183	97	26	7	130	33	2	8	8	51	364
Total	406	465	871	410	118	53	581	109	3	66	33	211	1663
Grand Total	1503	1249	2752	1041	325	117	1483	401	4	186	91	682	4917
Apprch %	54.6	45.4		70.2	21.9	7.9		58.8	0.6	27.3	13.3		
Total %	30.6	25.4	56	21.2	6.6	2.4	30.2	8.2	0.1	3.8	1.9	13.9	
Passenger Veh	1482	1221	2703	1021	321	117	1459	397	4	179	91	671	4833
% Passenger Veh	98.6	97.8	98.2	98.1	98.8	100	98.4	99	100	96.2	100	98.4	98.3
Heavy Veh	21	16	37	9	4	0	13	4	0	7	0	11	61
% Heavy Veh	1.4	1.3	1.3	0.9	1.2	0	0.9	1	0	3.8	0	1.6	1.2
Bus	0	12	12	11	0	0	11	0	0	0	0	0	23
% Bus	0	1	0.4	1.1	0	0	0.7	0	0	0	0	0	0.5

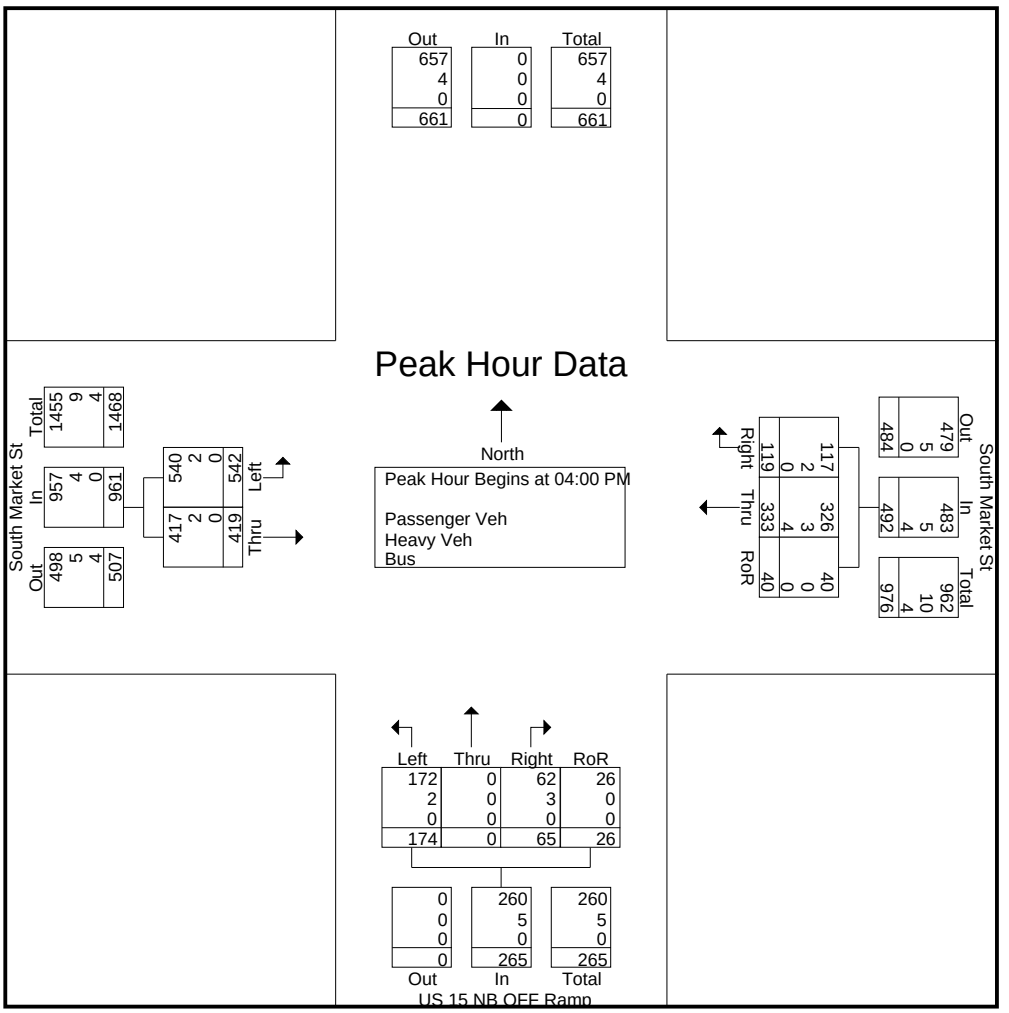
151 - 237 Gettysburg Pike

US 15 Northbound OFF Ramp - South Market Street PM

Weather: 40 Clear
Serial # 1601
By: ALPHA

File Name : 03 PM
Site Code : 03
Start Date : 2/20/2020
Page No : 2

	South Market St From West			South Market St From East				US 15 NB OFF Ramp From South					
Start Time	Left	Thru	App. Total	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	122	**120**	242	**92**	26	6	124	40	0	8	6	54	420
04:15 PM	**175**	110	**285**	91	33	**13**	**137**	**52**	0	19	6	**77**	**499**
04:30 PM	130	109	239	83	**39**	9	131	45	0	17	4	66	436
04:45 PM	115	80	195	67	21	12	100	37	0	**21**	**10**	68	363
Total Volume	542	419	961	333	119	40	492	174	0	65	26	265	1718
% App. Total	56.4	43.6		67.7	24.2	8.1		65.7	0	24.5	9.8		
PHF	.774	.873	.843	.905	.763	.769	.898	.837	.000	.774	.650	.860	.861
Passenger Veh	540	417	957	326	117	40	483	172	0	62	26	260	1700
% Passenger Veh	99.6	99.5	99.6	97.9	98.3	100	98.2	98.9	0	95.4	100	98.1	99.0
Heavy Veh	2	2	4	3	2	0	5	2	0	3	0	5	14
% Heavy Veh	0.4	0.5	0.4	0.9	1.7	0	1.0	1.1	0	4.6	0	1.9	0.8
Bus	0	0	0	4	0	0	4	0	0	0	0	0	4
% Bus	0	0	0	1.2	0	0	0.8	0	0	0	0	0	0.2



151 - 237 Gettysburg Pike

US 15 Northbound OFF Ramp - South Market Street Saturday

Weather: 40 Clear
Serial # 1601
By: ALPHA

File Name : 03 SA
Site Code : 03
Start Date : 2/22/2020
Page No : 1

Groups Printed- Passenger Veh - Heavy Veh - Bus

	South Market St From West			South Market St From East				US 15 NB OFF Ramp From South					
Start Time	Left	Thru	App. Total	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Int. Total
10:00 AM	28	78	106	59	28	17	104	41	0	8	8	57	267
10:15 AM	29	110	139	76	45	12	133	33	0	5	11	49	321
10:30 AM	39	112	151	77	47	27	151	29	0	3	7	39	341
10:45 AM	21	96	117	88	30	13	131	39	0	7	5	51	299
Total	117	396	513	300	150	69	519	142	0	23	31	196	1228
11:00 AM	21	90	111	76	32	13	121	41	0	7	3	51	283
11:15 AM	28	116	144	112	38	20	170	22	0	4	9	35	349
11:30 AM	33	130	163	114	31	21	166	43	0	4	5	52	381
11:45 AM	34	131	165	102	46	10	158	33	1	4	2	40	363
Total	116	467	583	404	147	64	615	139	1	19	19	178	1376
12:00 PM	29	129	158	79	29	13	121	39	0	7	7	53	332
12:15 PM	25	94	119	75	15	19	109	31	2	10	4	47	275
12:30 PM	34	100	134	123	44	17	184	31	2	10	8	51	369
12:45 PM	24	129	153	107	32	24	163	27	0	5	5	37	353
Total	112	452	564	384	120	73	577	128	4	32	24	188	1329
01:00 PM	37	135	172	76	37	15	128	34	0	5	11	50	350
01:15 PM	40	131	171	72	37	27	136	30	0	5	11	46	353
01:30 PM	35	117	152	81	48	28	157	22	1	8	7	38	347
01:45 PM	13	124	137	71	26	20	117	23	0	3	9	35	289
Total	125	507	632	300	148	90	538	109	1	21	38	169	1339
Grand Total	470	1822	2292	1388	565	296	2249	518	6	95	112	731	5272
Apprch %	20.5	79.5		61.7	25.1	13.2		70.9	0.8	13	15.3		
Total %	8.9	34.6	43.5	26.3	10.7	5.6	42.7	9.8	0.1	1.8	2.1	13.9	
Passenger Veh	467	1820	2287	1385	565	296	2246	513	6	95	112	726	5259
% Passenger Veh	99.4	99.9	99.8	99.8	100	100	99.9	99	100	100	100	99.3	99.8
Heavy Veh	3	2	5	2	0	0	2	5	0	0	0	5	12
% Heavy Veh	0.6	0.1	0.2	0.1	0	0	0.1	1	0	0	0	0.7	0.2
Bus	0	0	0	1	0	0	1	0	0	0	0	0	1
% Bus	0	0	0	0.1	0	0	0	0	0	0	0	0	0

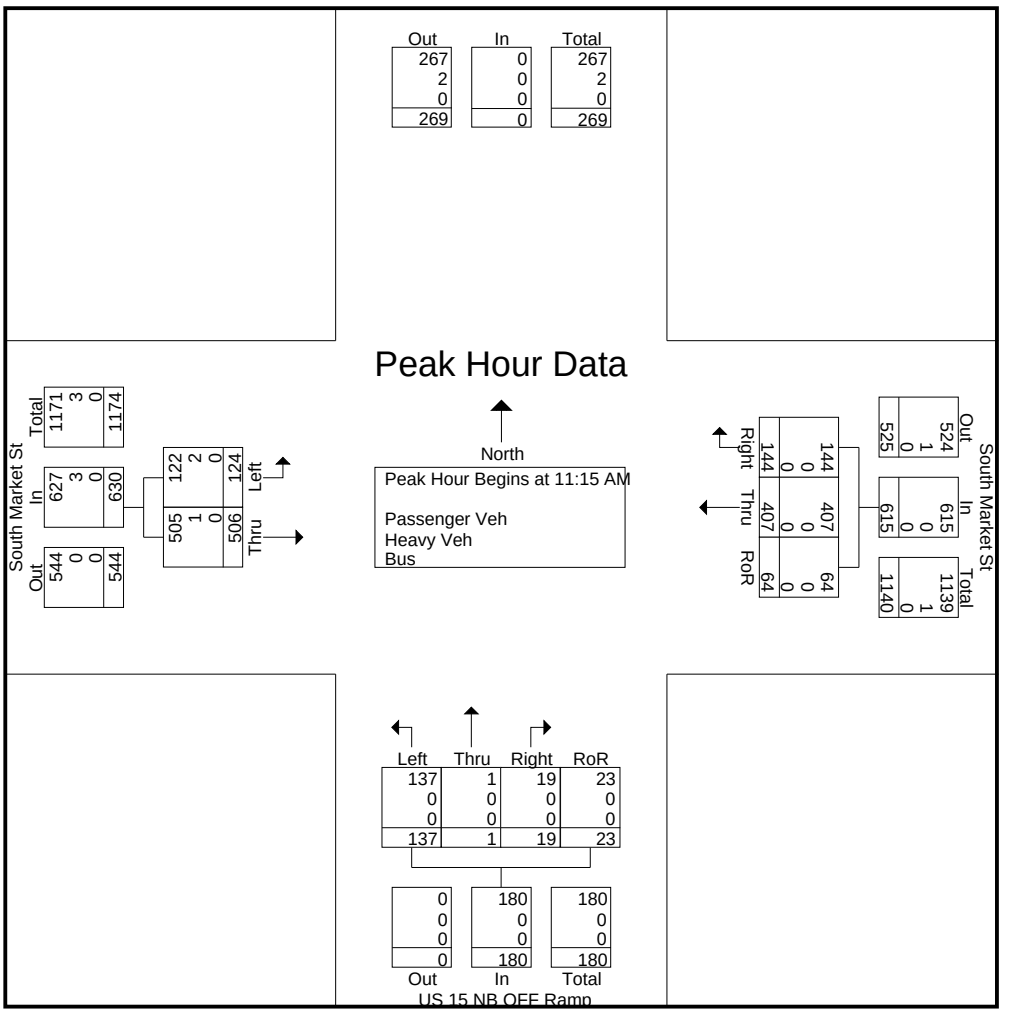
151 - 237 Gettysburg Pike

US 15 Northbound OFF Ramp - South Market Street Saturday

Weather: 40 Clear
Serial # 1601
By: ALPHA

File Name : 03 SA
Site Code : 03
Start Date : 2/22/2020
Page No : 2

	South Market St From West			South Market St From East				US 15 NB OFF Ramp From South					
Start Time	Left	Thru	App. Total	Thru	Right	RoR	App. Total	Left	Thru	Right	RoR	App. Total	Int. Total
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 11:15 AM													
11:15 AM	28	116	144	112	38	20	**170**	22	0	4	**9**	35	349
11:30 AM	33	130	163	**114**	31	**21**	166	**43**	0	4	5	52	**381**
11:45 AM	**34**	**131**	**165**	102	**46**	10	158	33	**1**	4	2	40	363
12:00 PM	29	129	158	79	29	13	121	39	0	**7**	7	**53**	332
Total Volume	124	506	630	407	144	64	615	137	1	19	23	180	1425
% App. Total	19.7	80.3		66.2	23.4	10.4		76.1	0.6	10.6	12.8		
PHF	.912	.966	.955	.893	.783	.762	.904	.797	.250	.679	.639	.849	.935
Passenger Veh	122	505	627	407	144	64	615	137	1	19	23	180	1422
% Passenger Veh	98.4	99.8	99.5	100	100	100	100	100	100	100	100	100	99.8
Heavy Veh	2	1	3	0	0	0	0	0	0	0	0	0	3
% Heavy Veh	1.6	0.2	0.5	0	0	0	0	0	0	0	0	0	0.2
Bus	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bus	0	0	0	0	0	0	0	0	0	0	0	0	0



Trip Generation Worksheets

Land Use: 221
Multifamily Housing (Mid-Rise)

Description

Mid-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have between three and 10 levels (floors). Multifamily housing (low-rise) (Land Use 220), multifamily housing (high-rise) (Land Use 222), off-campus student apartment (Land Use 225), and mid-rise residential with 1st-floor commercial (Land Use 231) are related land uses.

Additional Data

In prior editions of *Trip Generation Manual*, the mid-rise multifamily housing sites were further divided into rental and condominium categories. An investigation of vehicle trip data found no clear differences in trip making patterns between the rental and condominium sites within the ITE database. As more data are compiled for future editions, this land use classification can be reinvestigated.

For the six sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.46 residents per occupied dwelling unit.

For the five sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 95.7 percent of the total dwelling units were occupied.

Time-of-day distribution data for this land use are presented in Appendix A. For the eight general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:00 and 8:00 a.m. and 4:45 and 5:45 p.m., respectively.

For the four dense multi-use urban sites with 24-hour count data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:15 and 8:15 a.m. and 4:15 and 5:15 p.m., respectively. For the three center city core sites with 24-hour count data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 6:45 and 7:45 a.m. and 5:00 and 6:00 p.m., respectively.

For the six sites for which data were provided for both occupied dwelling units and residents, there was an average of 2.46 residents per occupied dwelling unit.

For the five sites for which data were provided for both occupied dwelling units and total dwelling units, an average of 95.7 percent of the units were occupied.

The average numbers of person trips per vehicle trip at the five center city core sites at which both person trip and vehicle trip data were collected were as follows:

- 1.84 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.94 during Weekday, AM Peak Hour of Generator
- 2.07 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 2.59 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 32 dense multi-use urban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.90 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.90 during Weekday, AM Peak Hour of Generator
- 2.00 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 2.08 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 13 general urban/suburban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.56 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.88 during Weekday, AM Peak Hour of Generator
- 1.70 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 2.07 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), British Columbia (CAN), California, Delaware, District of Columbia, Florida, Georgia, Illinois, Maryland, Massachusetts, Minnesota, New Hampshire, New Jersey, Ontario, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Utah, Virginia, and Wisconsin.

Source Numbers

168, 188, 204, 305, 306, 321, 357, 390, 436, 525, 530, 579, 638, 818, 857, 866, 901, 904, 910, 912, 918, 934, 936, 939, 944, 947, 948, 949, 959, 963, 964, 966, 967, 969, 970

Multifamily Housing (Mid-Rise)
(221)

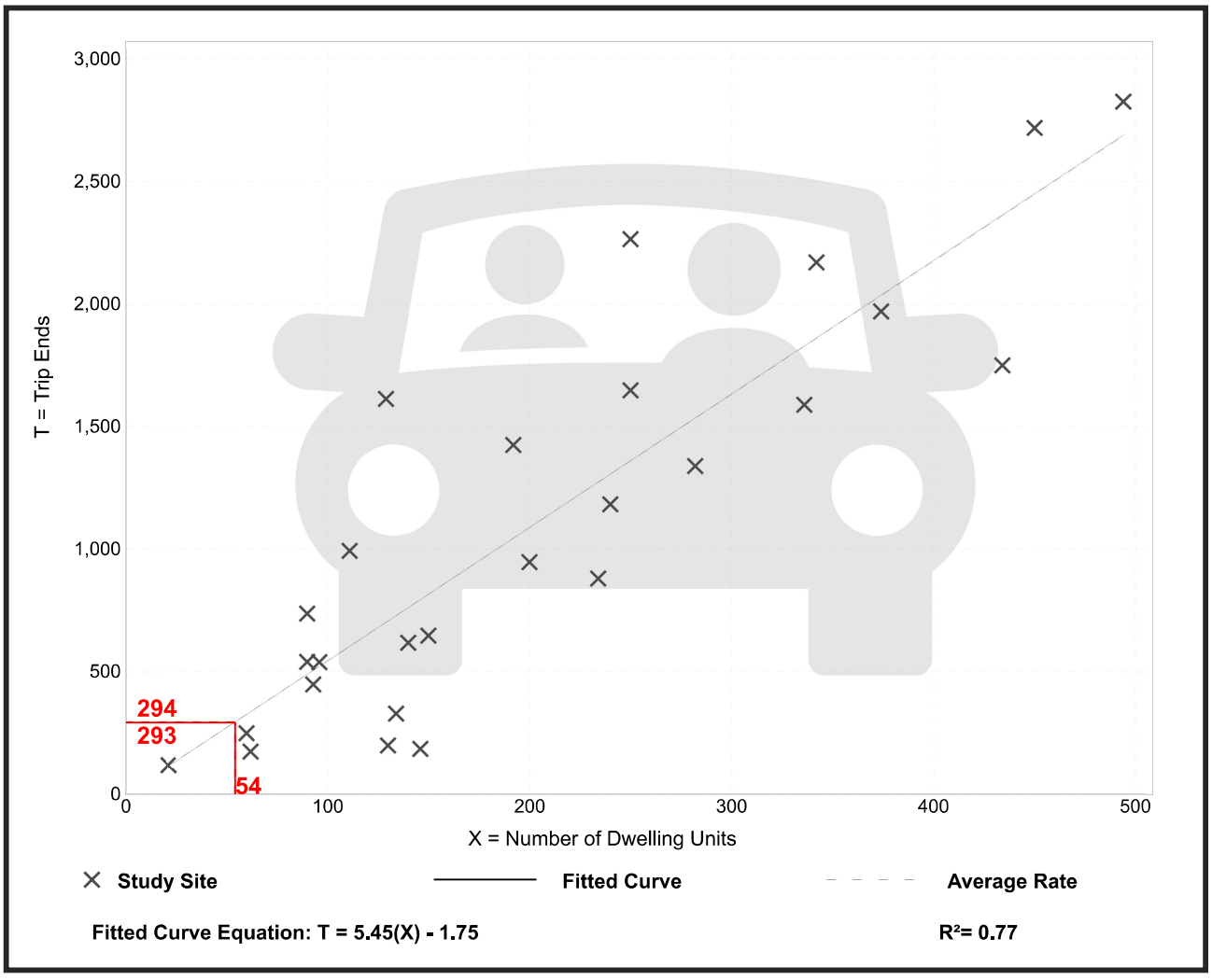
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 27
Avg. Num. of Dwelling Units: 205
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
5.44	1.27 - 12.50	2.03

Data Plot and Equation



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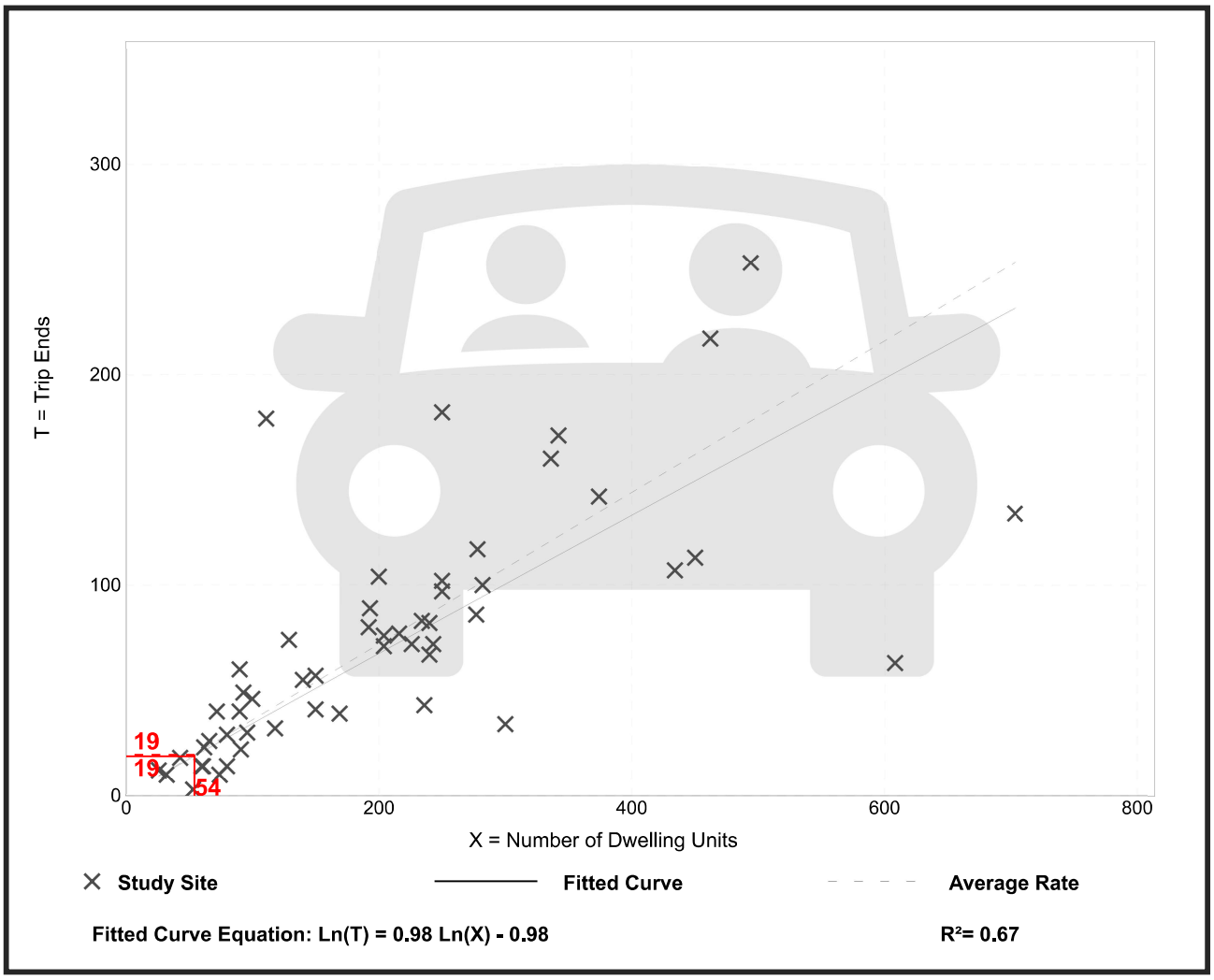
Multifamily Housing (Mid-Rise)
(221)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 53
Avg. Num. of Dwelling Units: 207
Directional Distribution: 26% entering, 74% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.36	0.06 - 1.61	0.19

Data Plot and Equation



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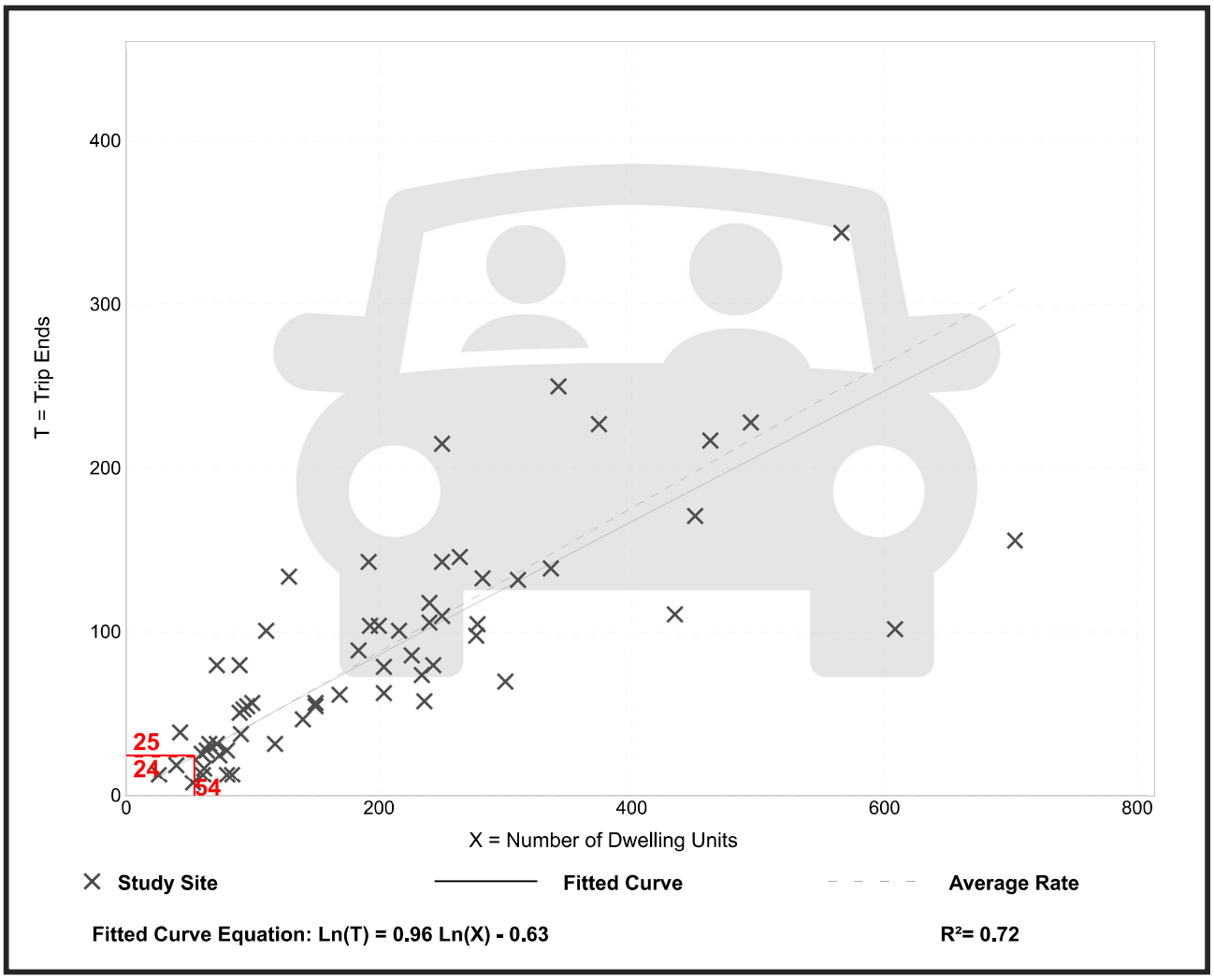
Multifamily Housing (Mid-Rise)
(221)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 60
Avg. Num. of Dwelling Units: 208
Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.44	0.15 - 1.11	0.19

Data Plot and Equation



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Multifamily Housing (Mid-Rise)
(221)

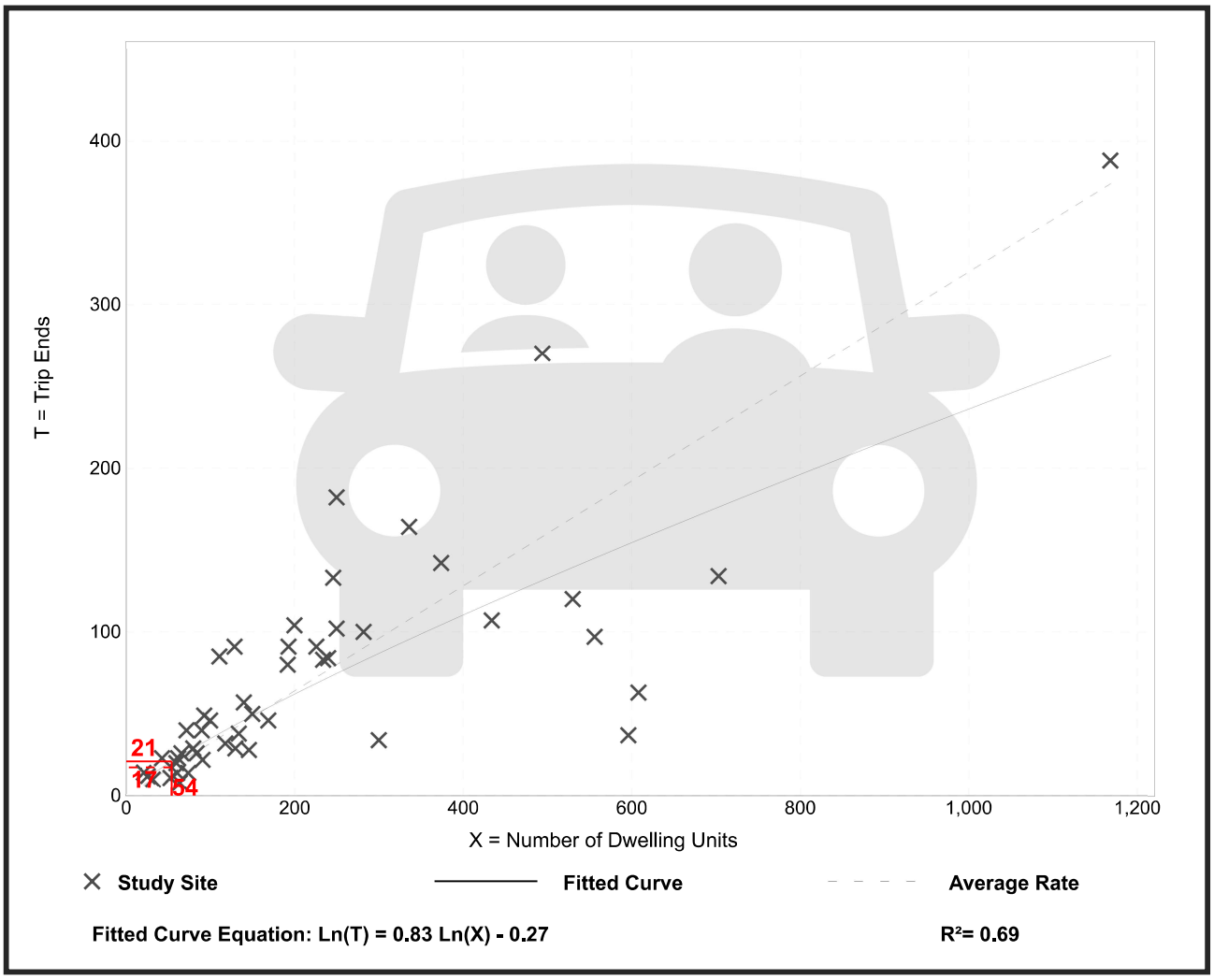
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 48
Avg. Num. of Dwelling Units: 225
Directional Distribution: 27% entering, 73% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.32	0.06 - 0.77	0.17

Data Plot and Equation



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Multifamily Housing (Mid-Rise)
(221)

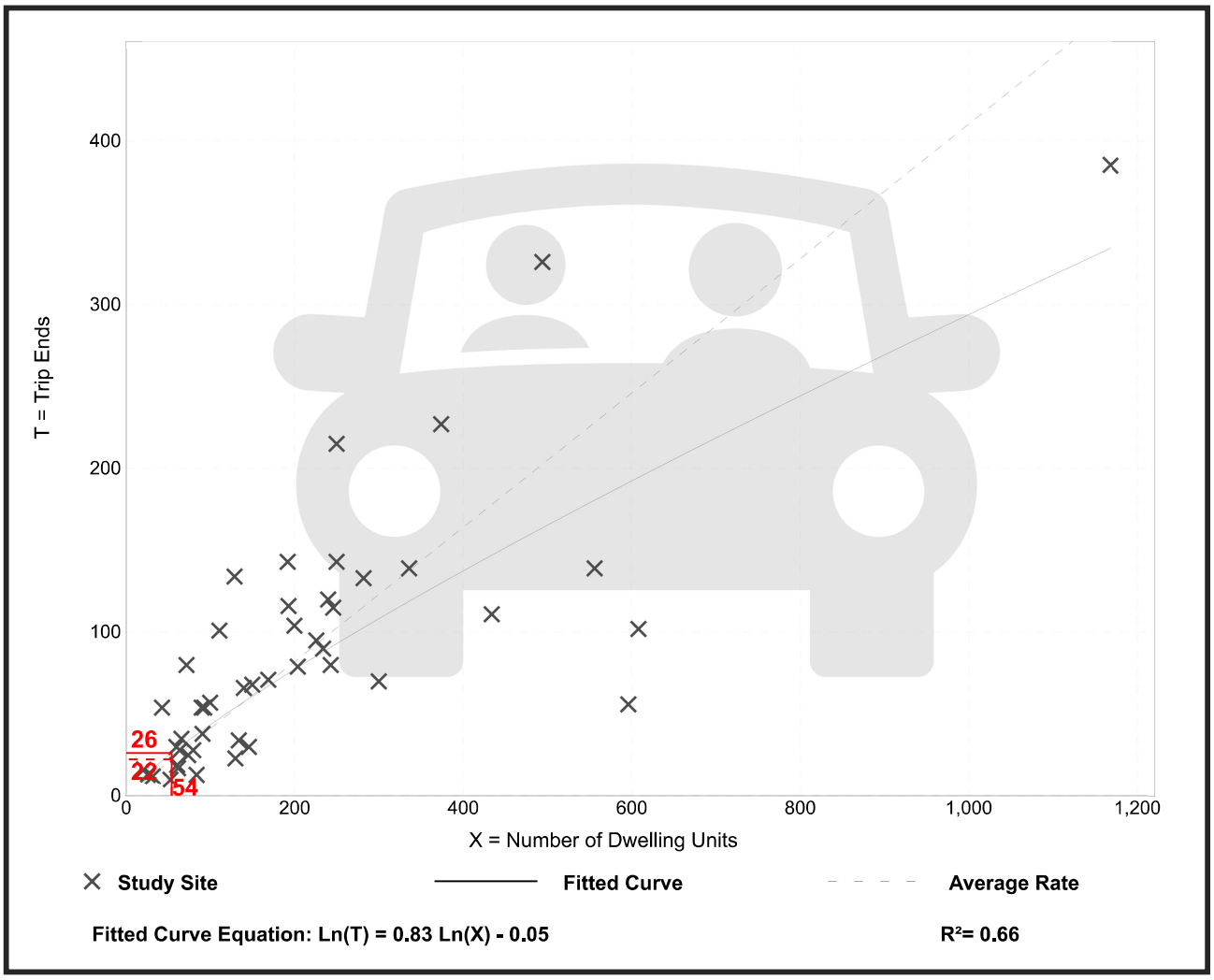
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 47
Avg. Num. of Dwelling Units: 211
Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.41	0.09 - 1.26	0.22

Data Plot and Equation



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Multifamily Housing (Mid-Rise)
(221)

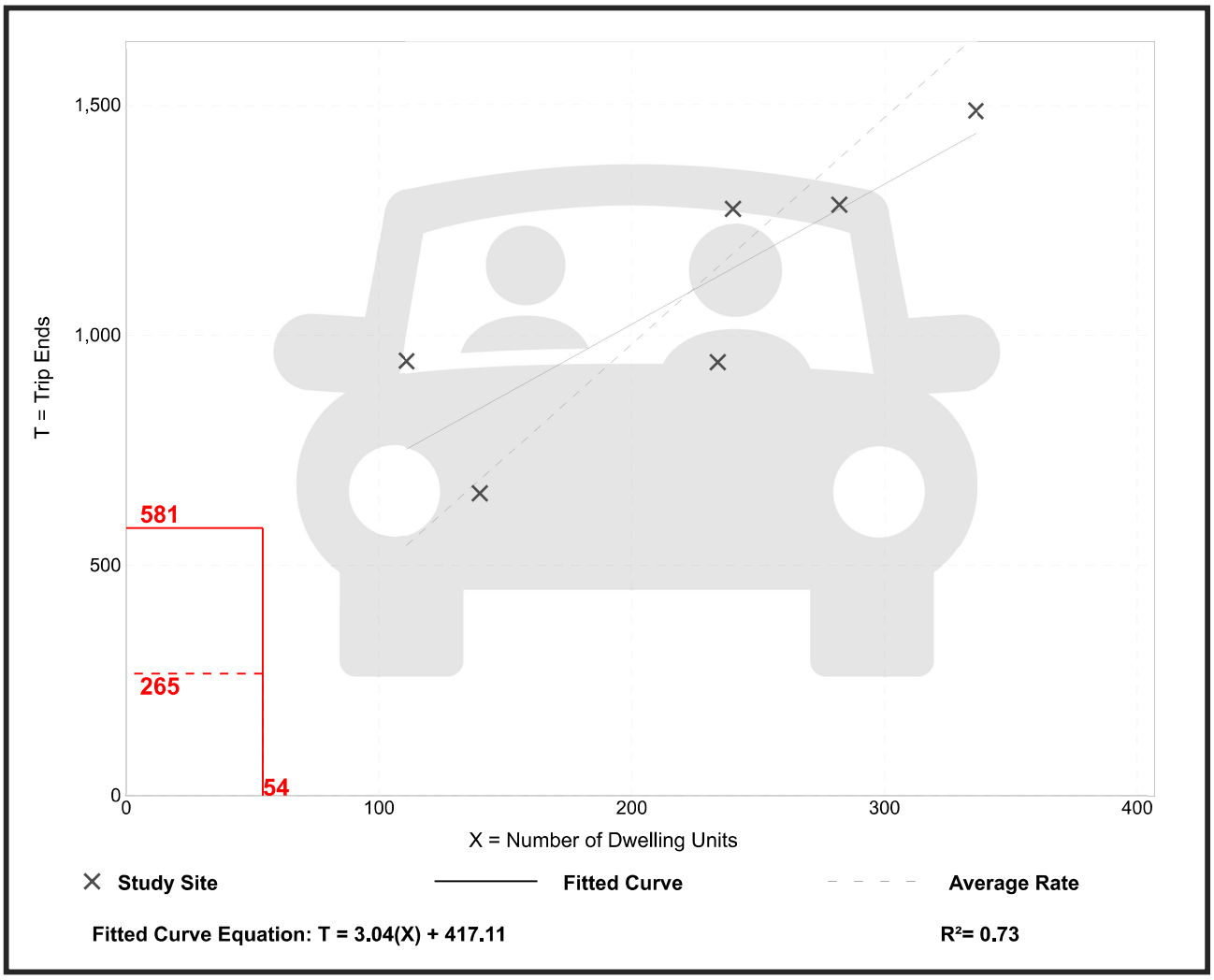
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Saturday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 6
Avg. Num. of Dwelling Units: 224
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.91	4.03 - 8.51	1.26

Data Plot and Equation



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Multifamily Housing (Mid-Rise)
(221)

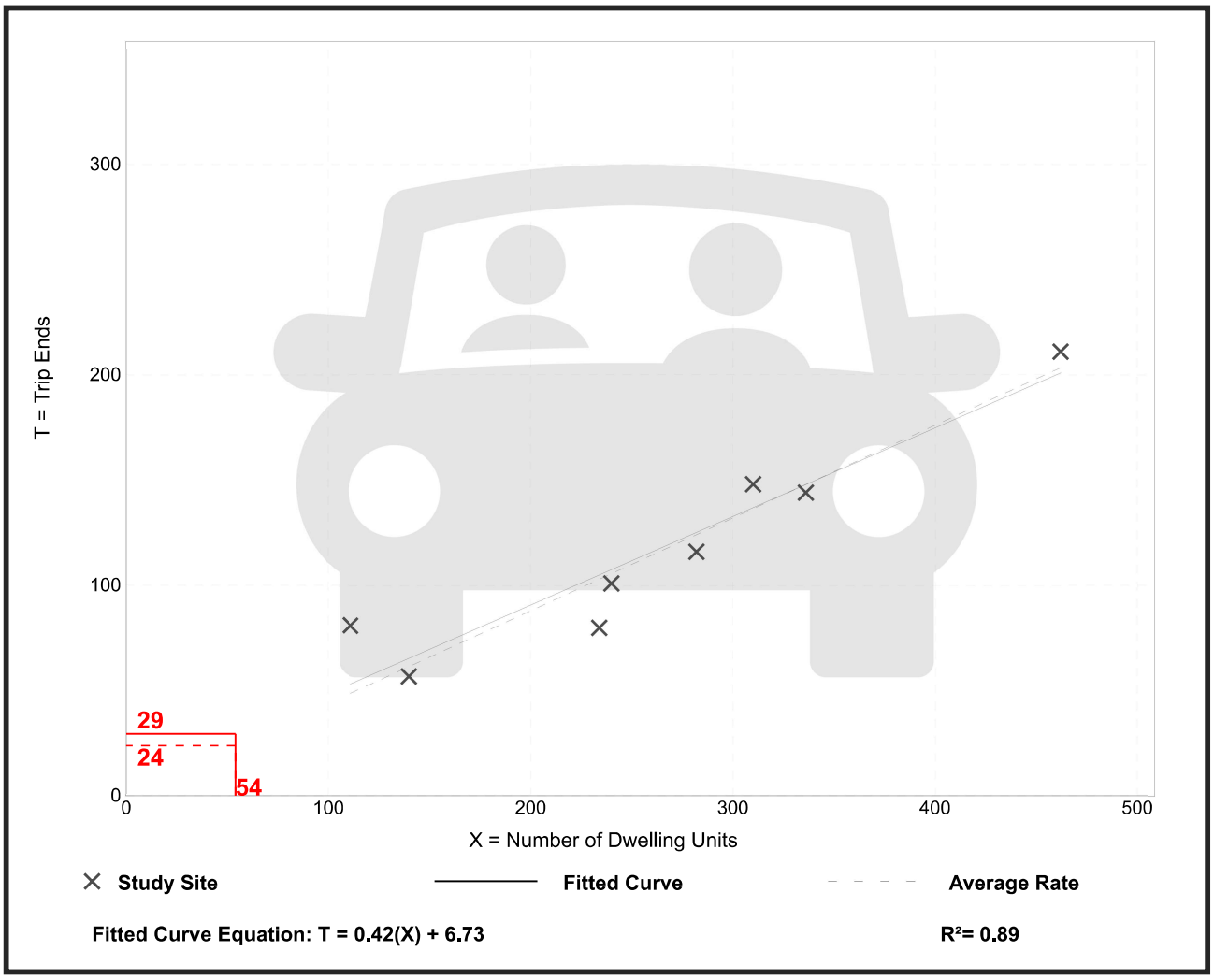
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Saturday, Peak Hour of Generator**

Setting/Location: **General Urban/Suburban**
Number of Studies: 8
Avg. Num. of Dwelling Units: 264
Directional Distribution: 49% entering, 51% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.44	0.34 - 0.73	0.08

Data Plot and Equation



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Land Use: 820
Shopping Center

Description

A shopping center is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. A shopping center's composition is related to its market area in terms of size, location, and type of store. A shopping center also provides on-site parking facilities sufficient to serve its own parking demands. Factory outlet center (Land Use 823) is a related use.

Additional Data

Shopping centers, including neighborhood centers, community centers, regional centers, and super regional centers, were surveyed for this land use. Some of these centers contained non-merchandising facilities, such as office buildings, movie theaters, restaurants, post offices, banks, health clubs, and recreational facilities (for example, ice skating rinks or indoor miniature golf courses).

Many shopping centers, in addition to the integrated unit of shops in one building or enclosed around a mall, include outparcels (peripheral buildings or pads located on the perimeter of the center adjacent to the streets and major access points). These buildings are typically drive-in banks, retail stores, restaurants, or small offices. Although the data herein do not indicate which of the centers studied included peripheral buildings, it can be assumed that some of the data show their effect.

The vehicle trips generated at a shopping center are based upon the total GLA of the center. In cases of smaller centers without an enclosed mall or peripheral buildings, the GLA could be the same as the gross floor area of the building.

Time-of-day distribution data for this land use are presented in Appendix A. For the 10 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:45 a.m. and 12:45 p.m. and 12:15 and 1:15 p.m., respectively.

The average numbers of person trips per vehicle trip at the 27 general urban/suburban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.31 during Weekday, AM Peak Hour of Generator
- 1.43 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.46 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), British Columbia (CAN), California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Nevada, New Jersey, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, South Dakota, Tennessee, Texas, Vermont, Virginia, Washington, West Virginia, and Wisconsin.

Source Numbers

105, 110, 154, 156, 159, 186, 190, 198, 199, 202, 204, 211, 213, 239, 251, 259, 260, 269, 294, 295, 299, 300, 301, 304, 305, 307, 308, 309, 310, 311, 314, 315, 316, 317, 319, 358, 365, 376, 385, 390, 400, 404, 414, 420, 423, 428, 437, 440, 442, 444, 446, 507, 562, 580, 598, 629, 658, 702, 715, 728, 868, 870, 871, 880, 899, 908, 912, 915, 926, 936, 944, 946, 960, 961, 962, 973, 974, 978

Shopping Center
(820)

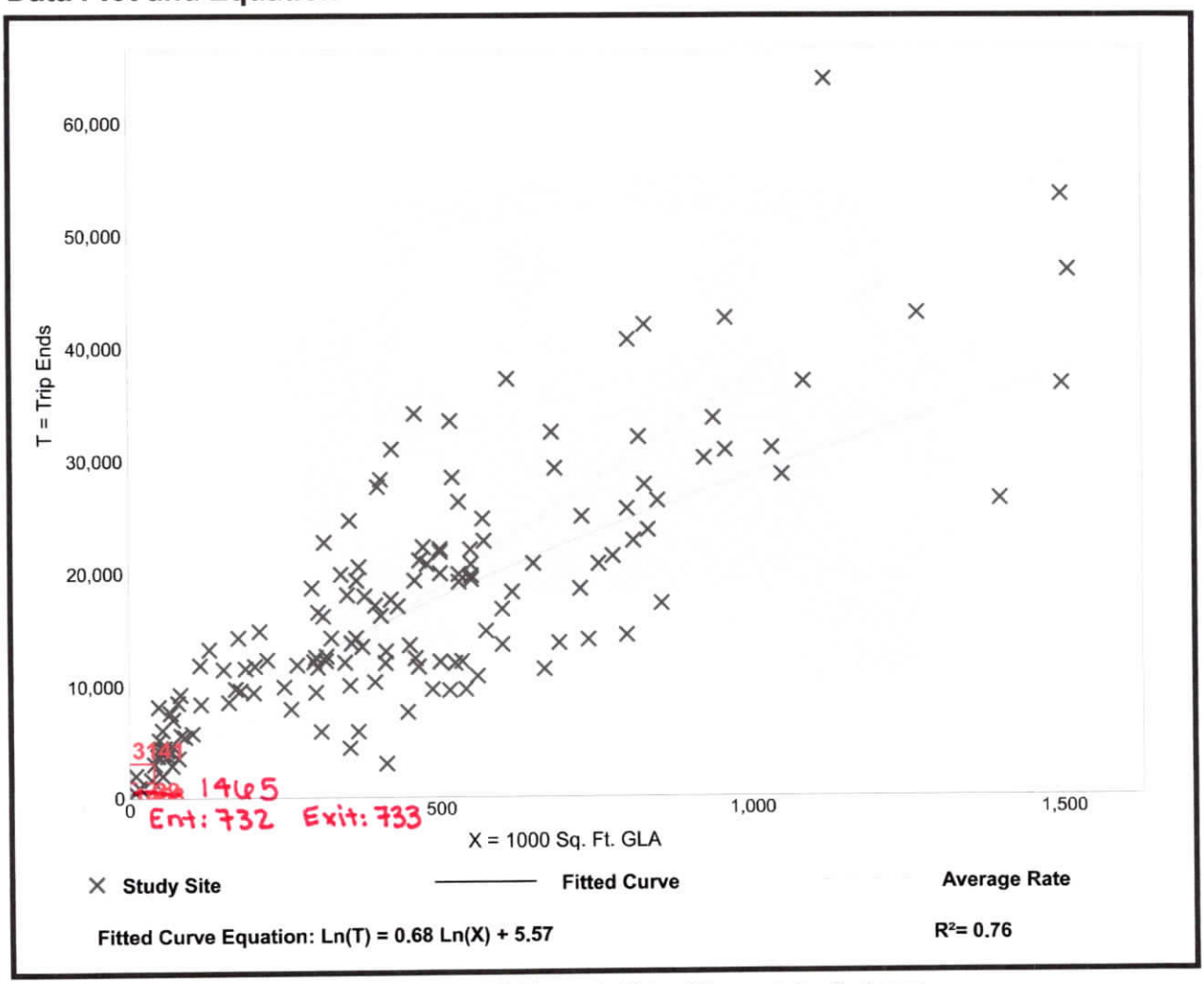
Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 147
Avg. 1000 Sq. Ft. GLA: 453
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
37.75	7.42 - 207.98	16.41

Data Plot and Equation



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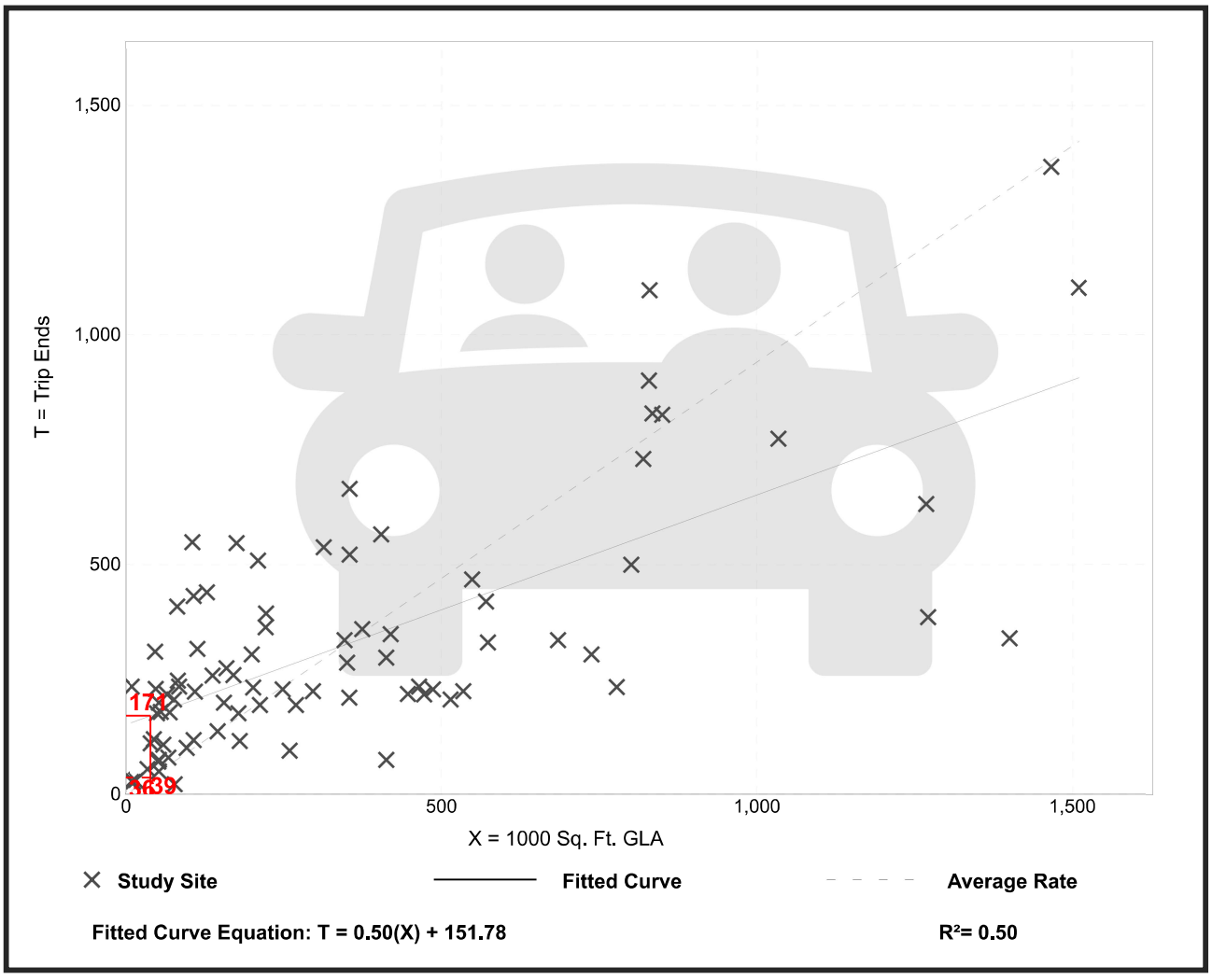
Shopping Center
(820)

Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 84
Avg. 1000 Sq. Ft. GLA: 351
Directional Distribution: 62% entering, 38% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
0.94	0.18 - 23.74	0.87

Data Plot and Equation



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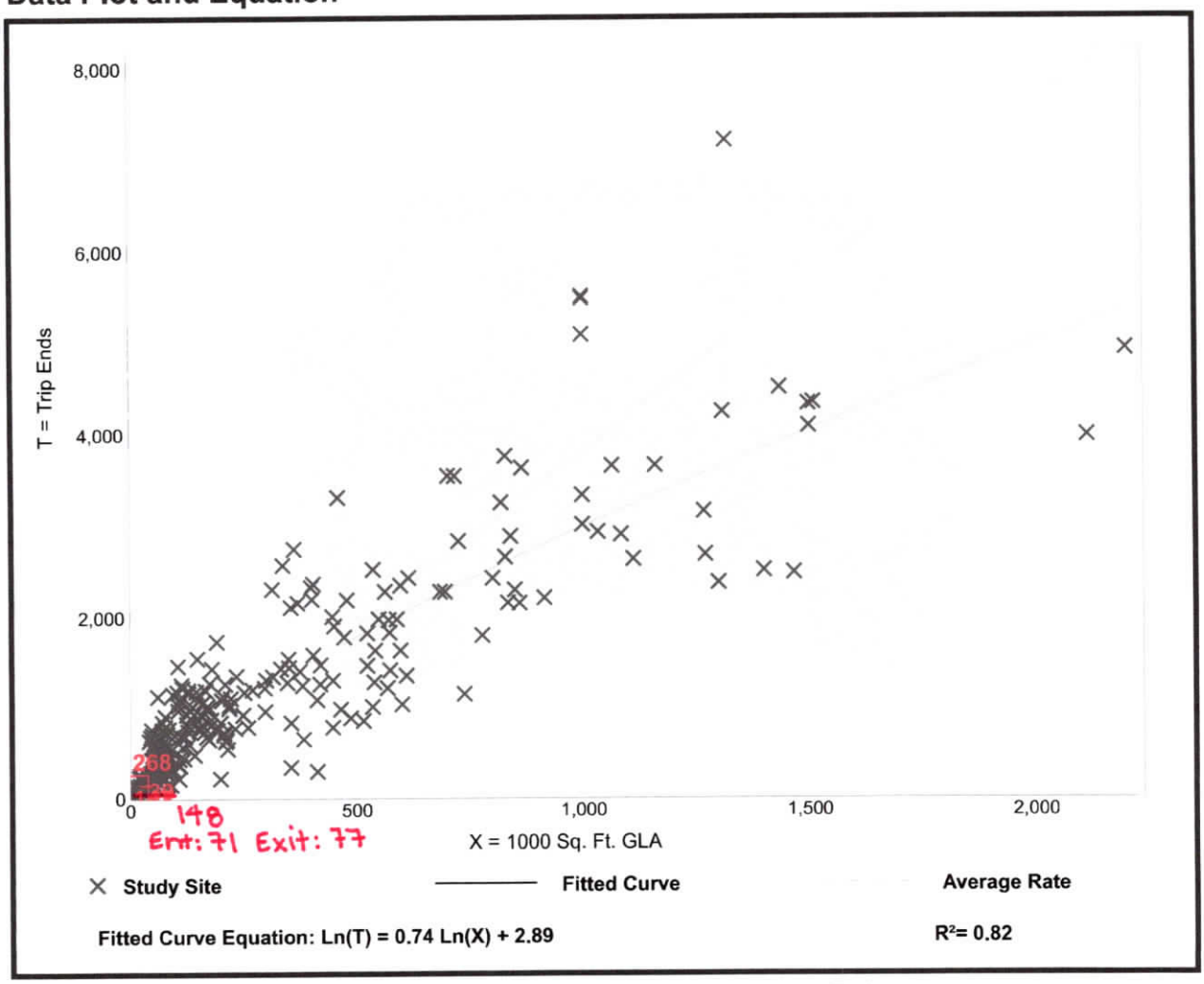
Shopping Center
(820)

Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 261
Avg. 1000 Sq. Ft. GLA: 327
Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
3.81	0.74 - 18.69	2.04

Data Plot and Equation



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Shopping Center
(820)

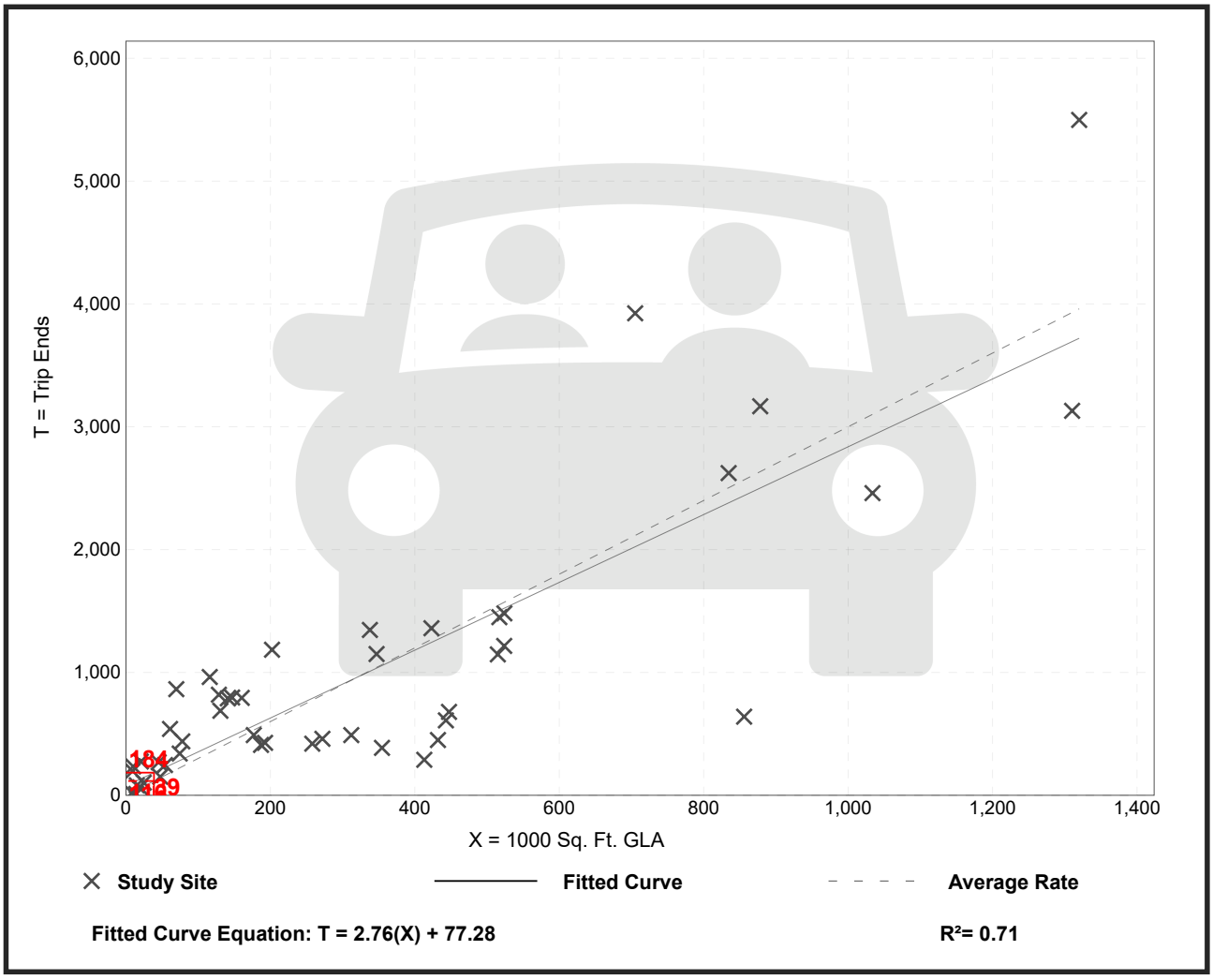
Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 47
Avg. 1000 Sq. Ft. GLA: 323
Directional Distribution: 54% entering, 46% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
3.00	0.70 - 23.74	1.85

Data Plot and Equation



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Shopping Center
(820)

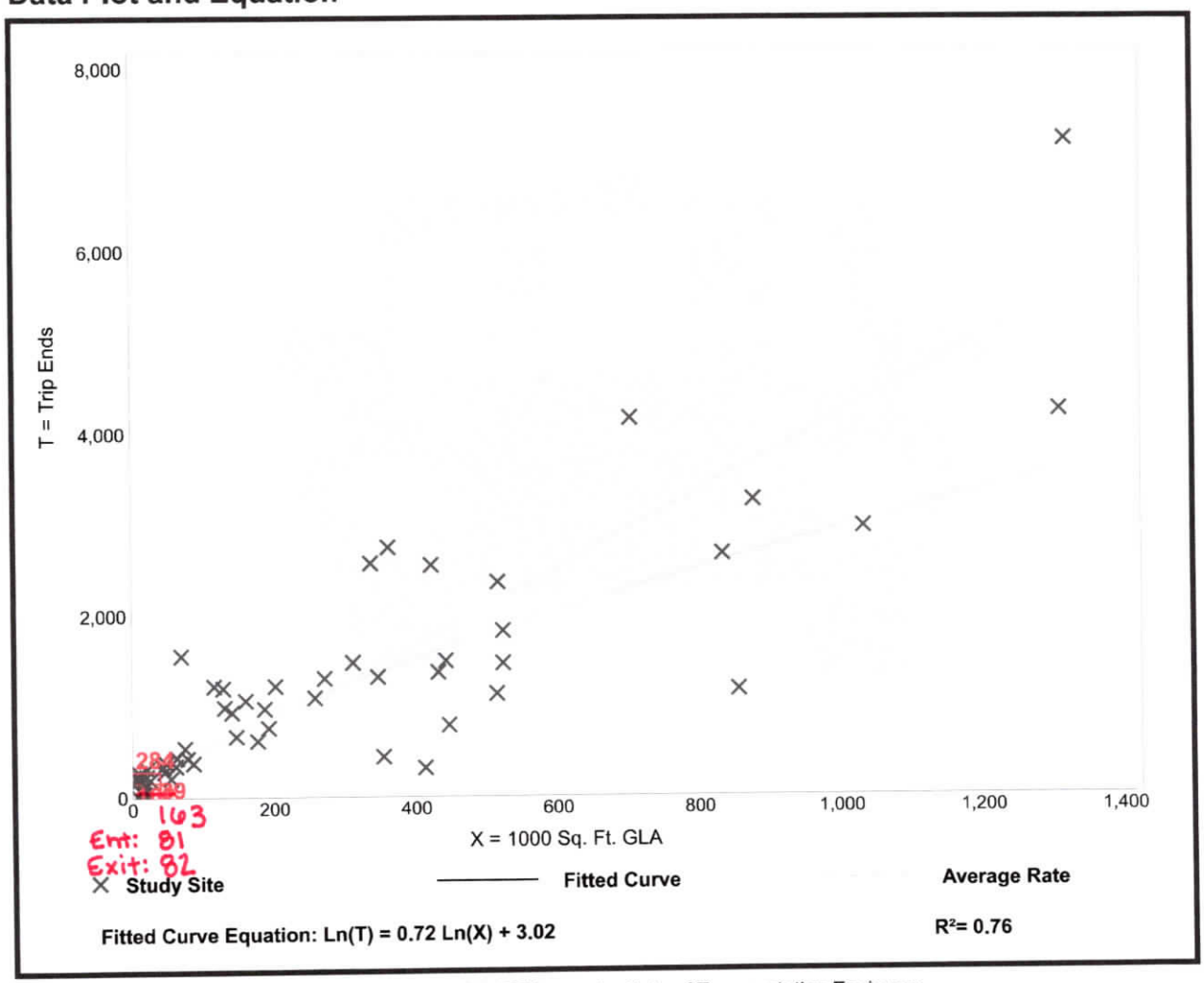
Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 53
Avg. 1000 Sq. Ft. GLA: 298
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
4.21	0.78 - 27.27	2.47

Data Plot and Equation



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Shopping Center
(820)

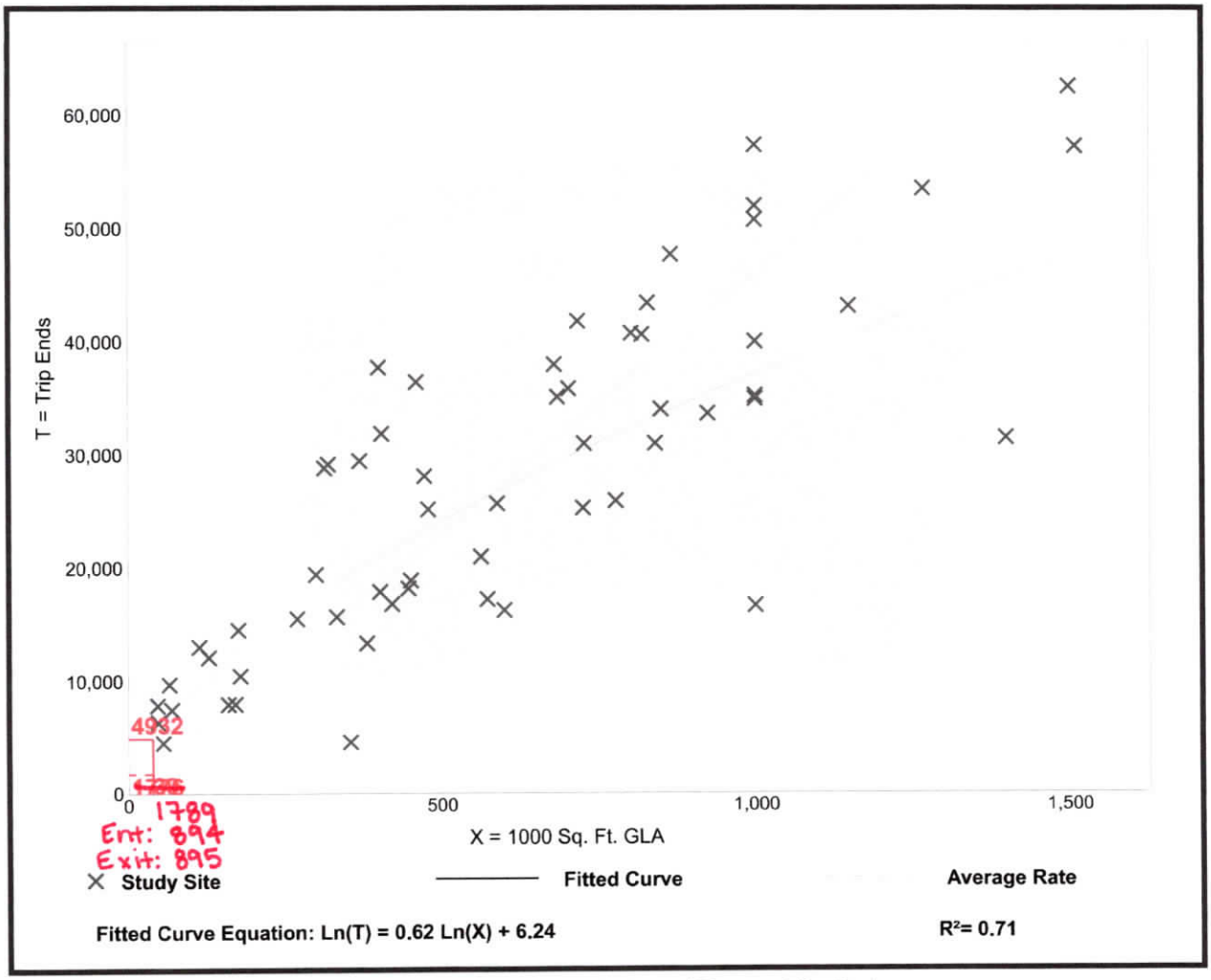
Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Saturday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 58
Avg. 1000 Sq. Ft. GLA: 602
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
46.12	13.01 - 167.89	17.91

Data Plot and Equation



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Shopping Center
(820)

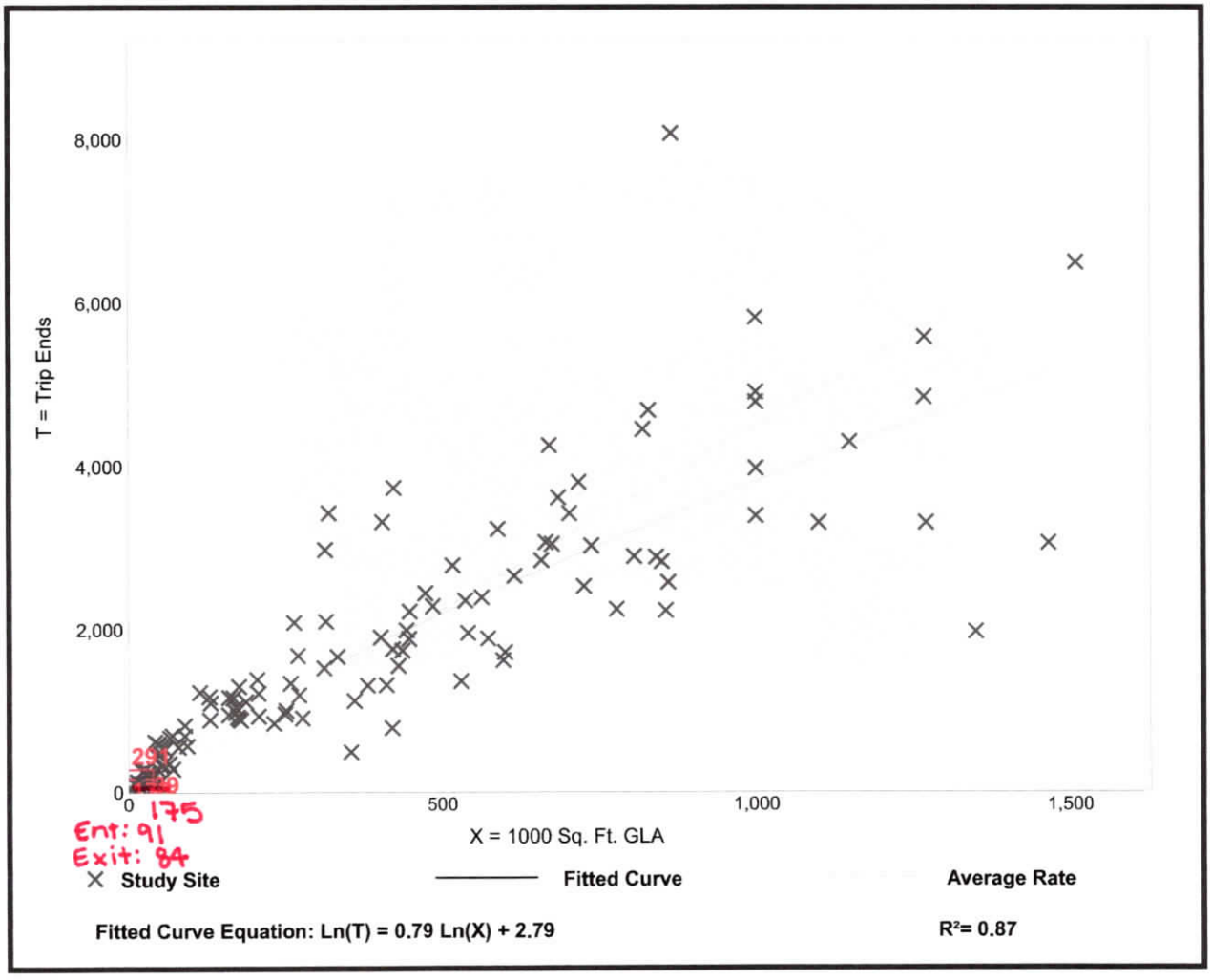
Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Saturday, Peak Hour of Generator**

Setting/Location: **General Urban/Suburban**
Number of Studies: 119
Avg. 1000 Sq. Ft. GLA: 416
Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
4.50	1.42 - 15.10	1.88

Data Plot and Equation



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Shopping Center
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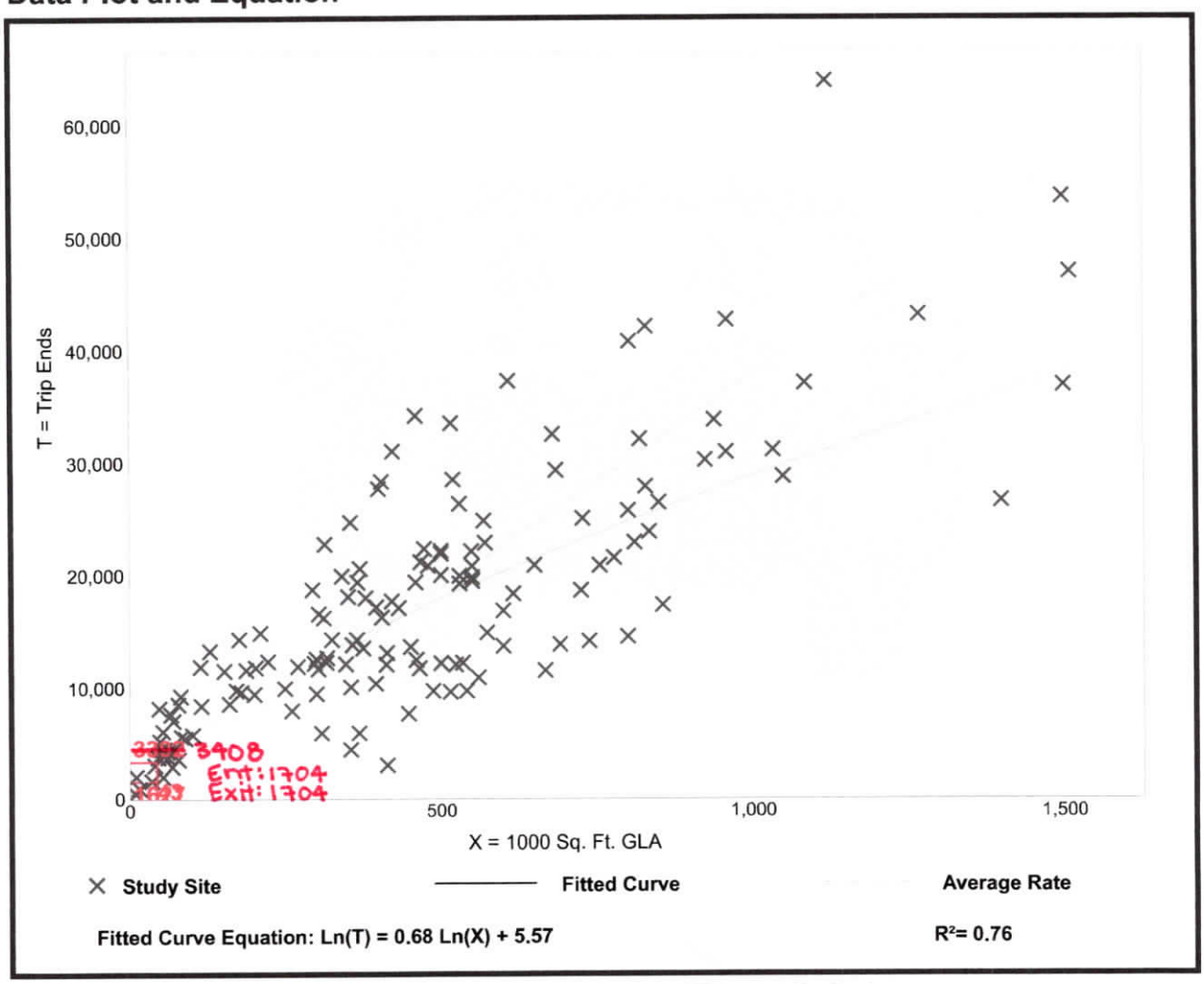

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On a: **Weekday,**
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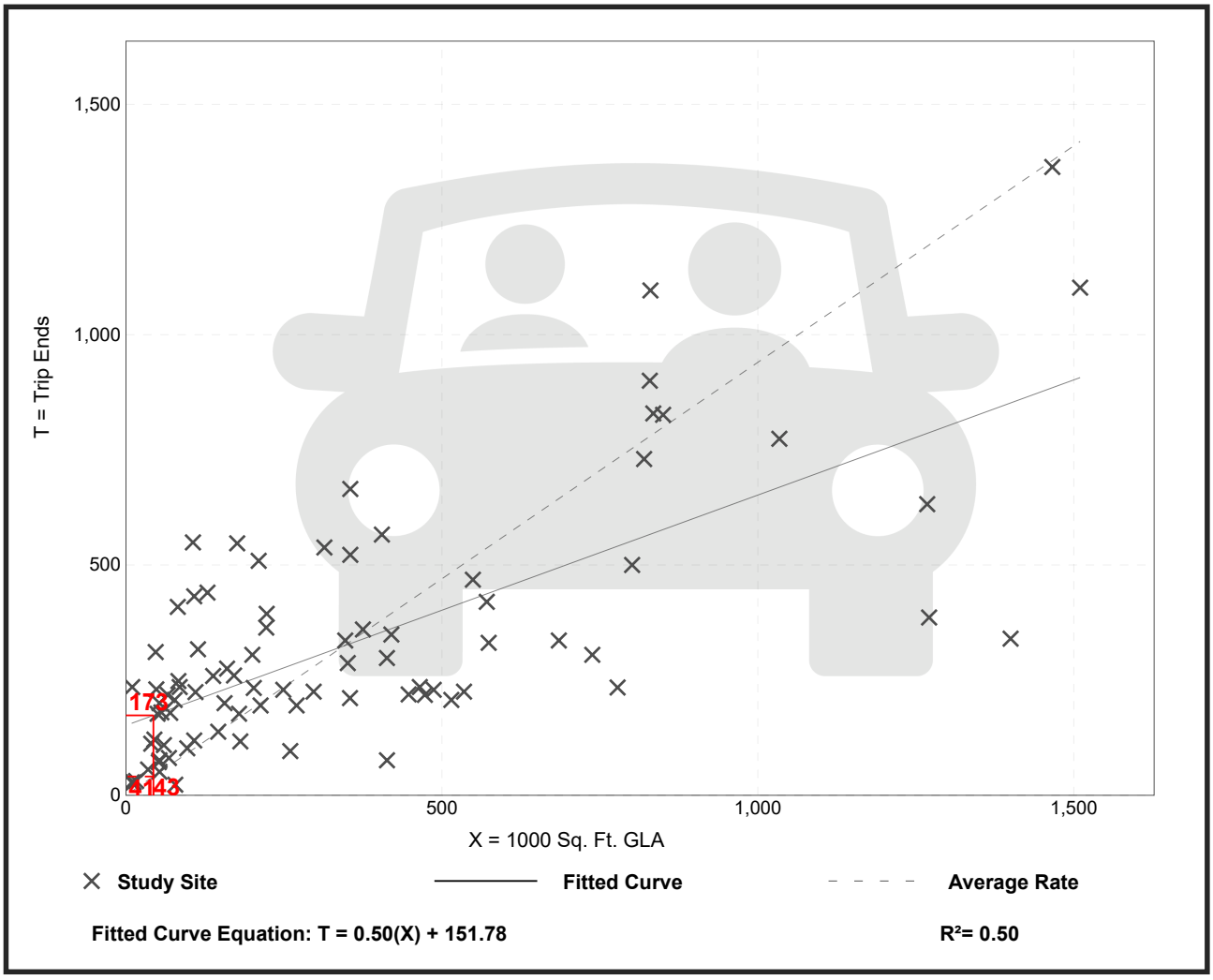

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On a: **Weekday,**
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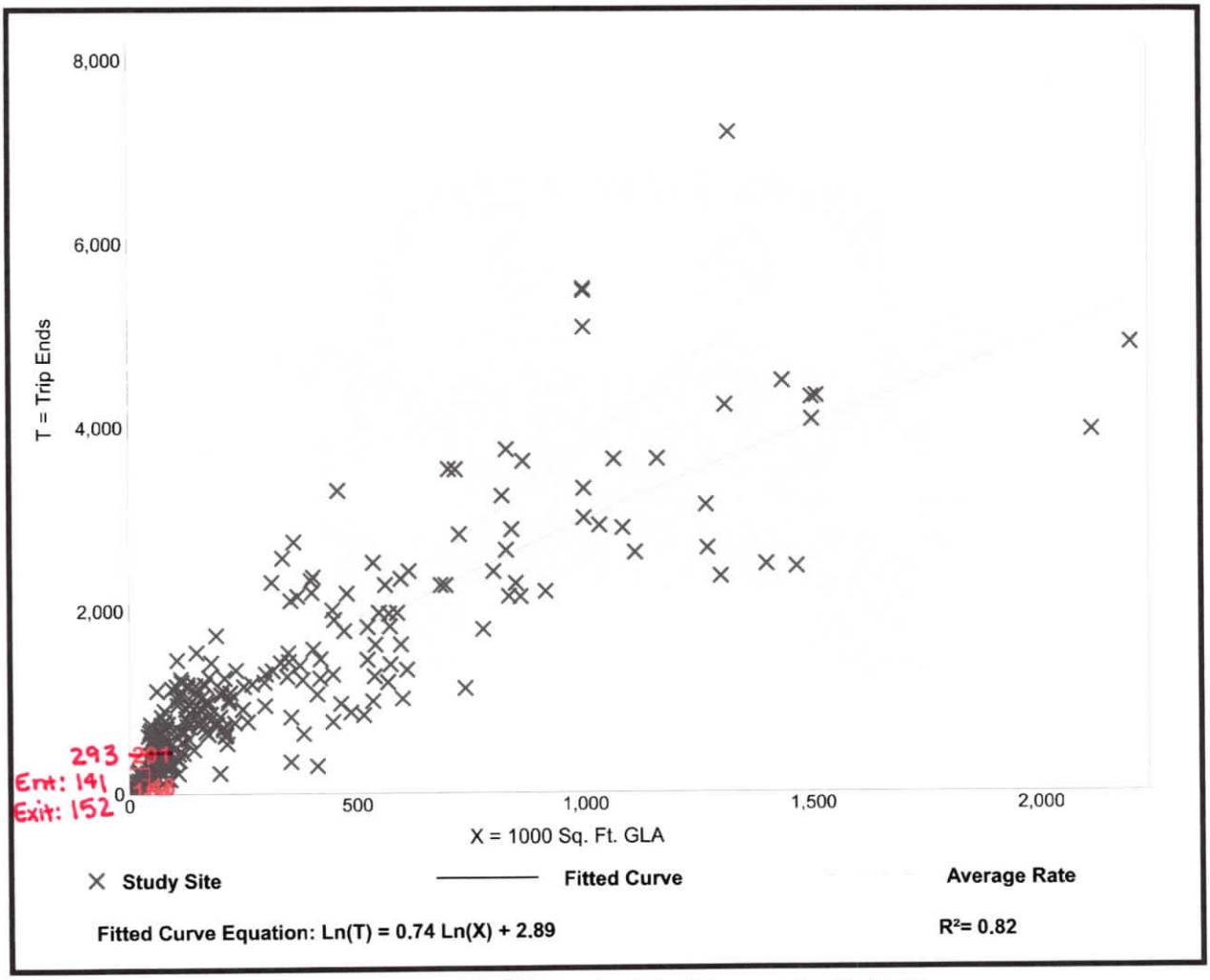

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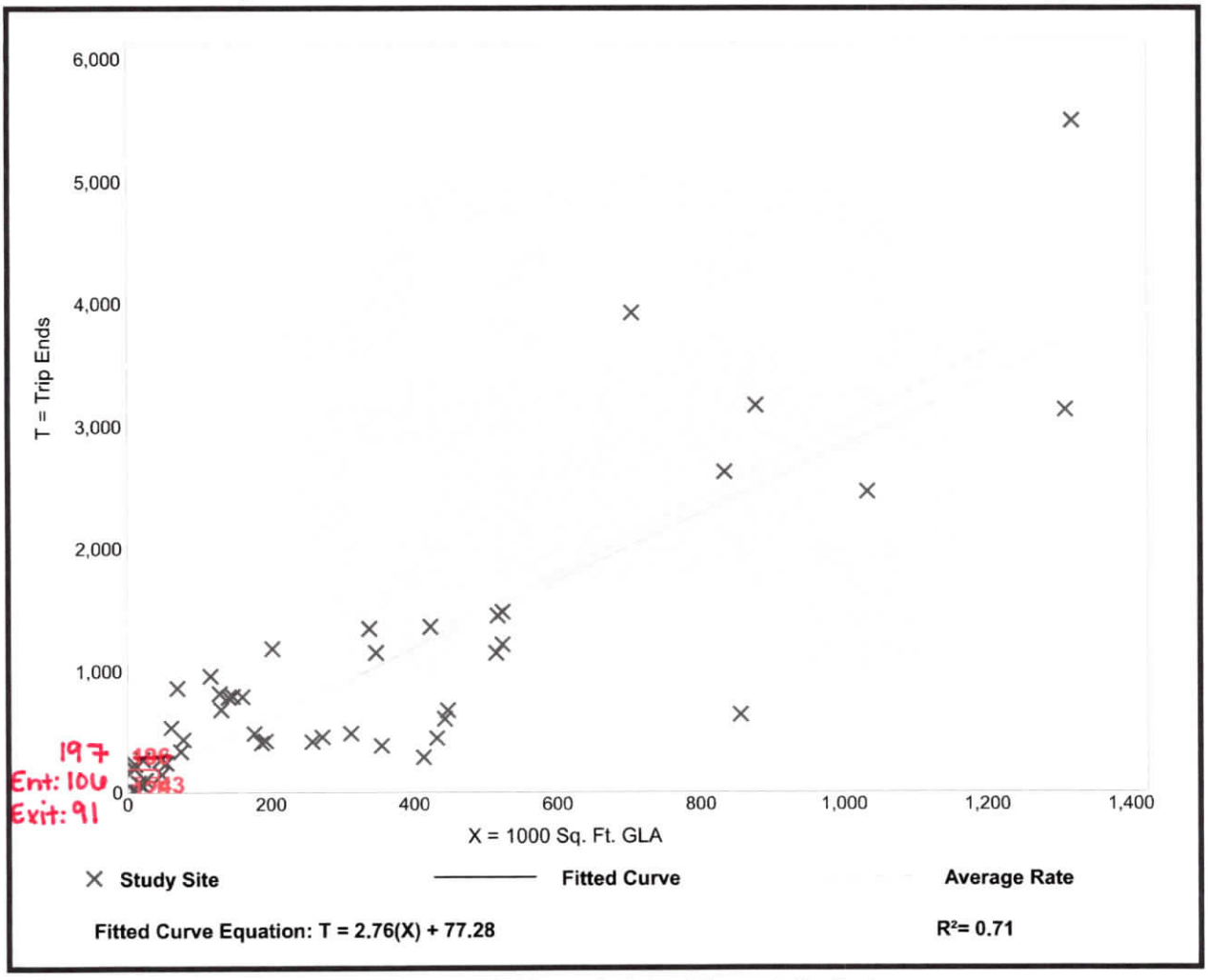

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Shopping Center
(820)

Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 53
Avg. 1000 Sq. Ft. GLA: 298
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
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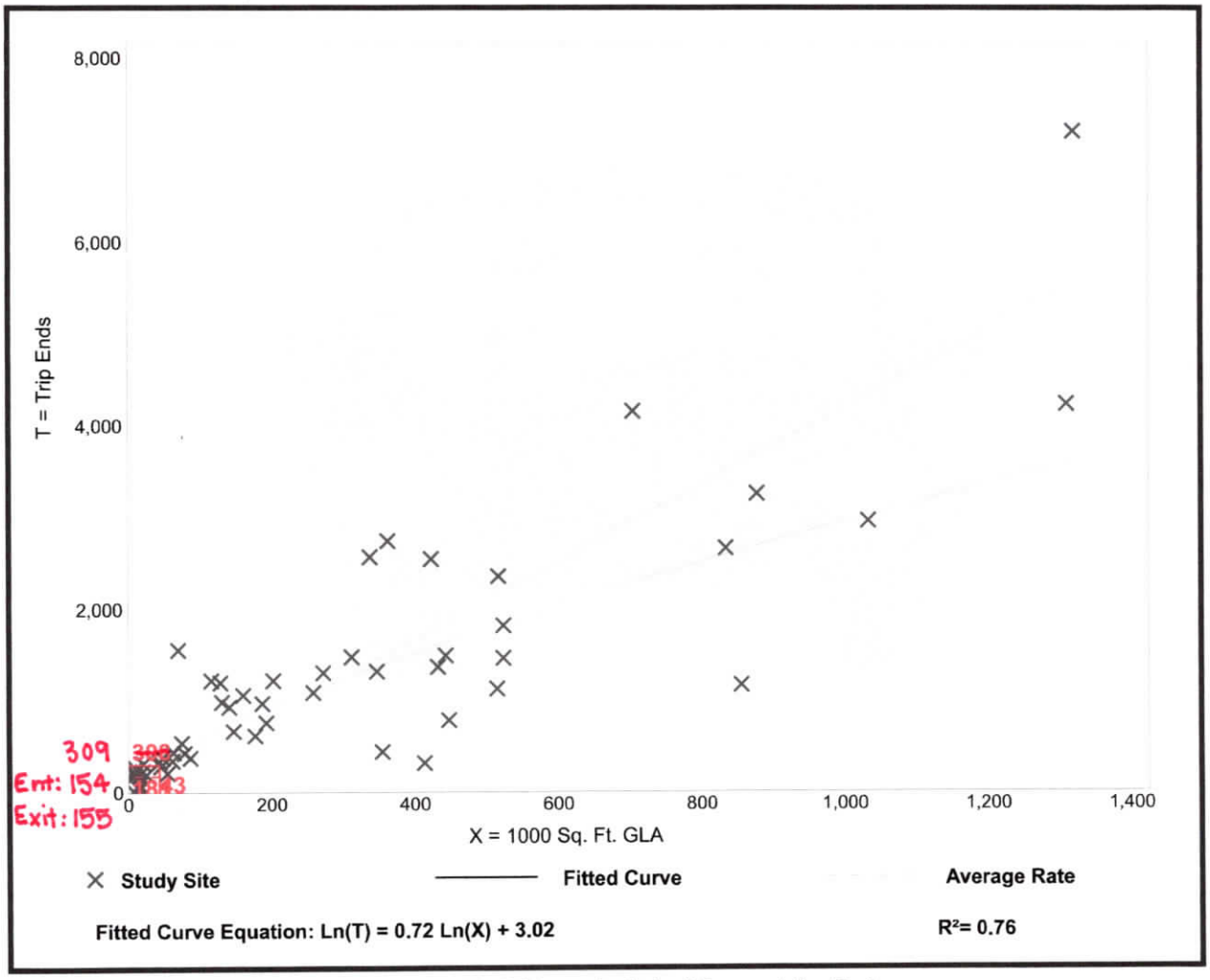
Data Plot and Equation



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On a: **Saturday**

Setting/Location: **General Urban/Suburban**
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Vehicle Trip Generation per 1000 Sq. Ft. GLA

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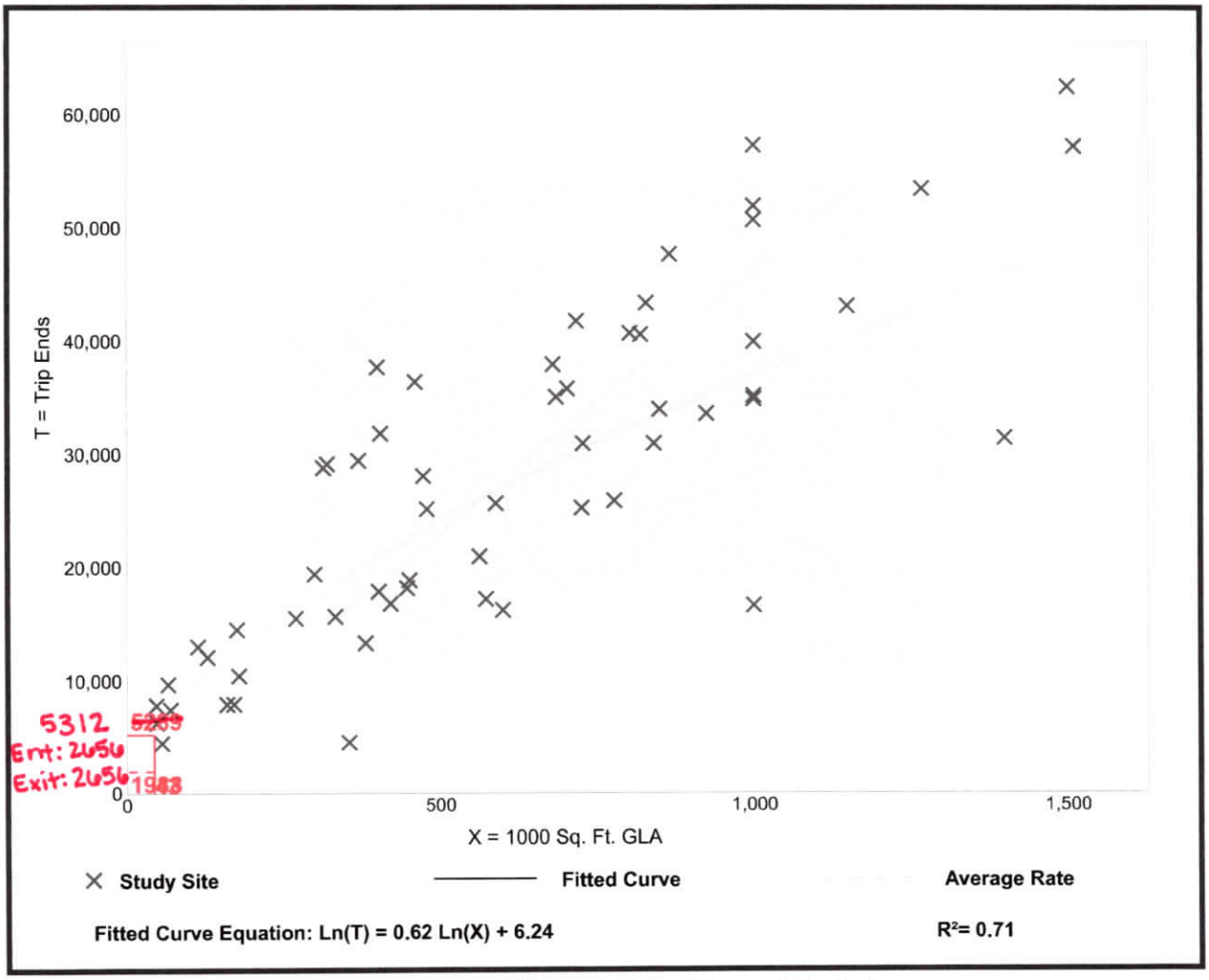

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Shopping Center
(820)

Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Saturday, Peak Hour of Generator**

Setting/Location: **General Urban/Suburban**
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Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
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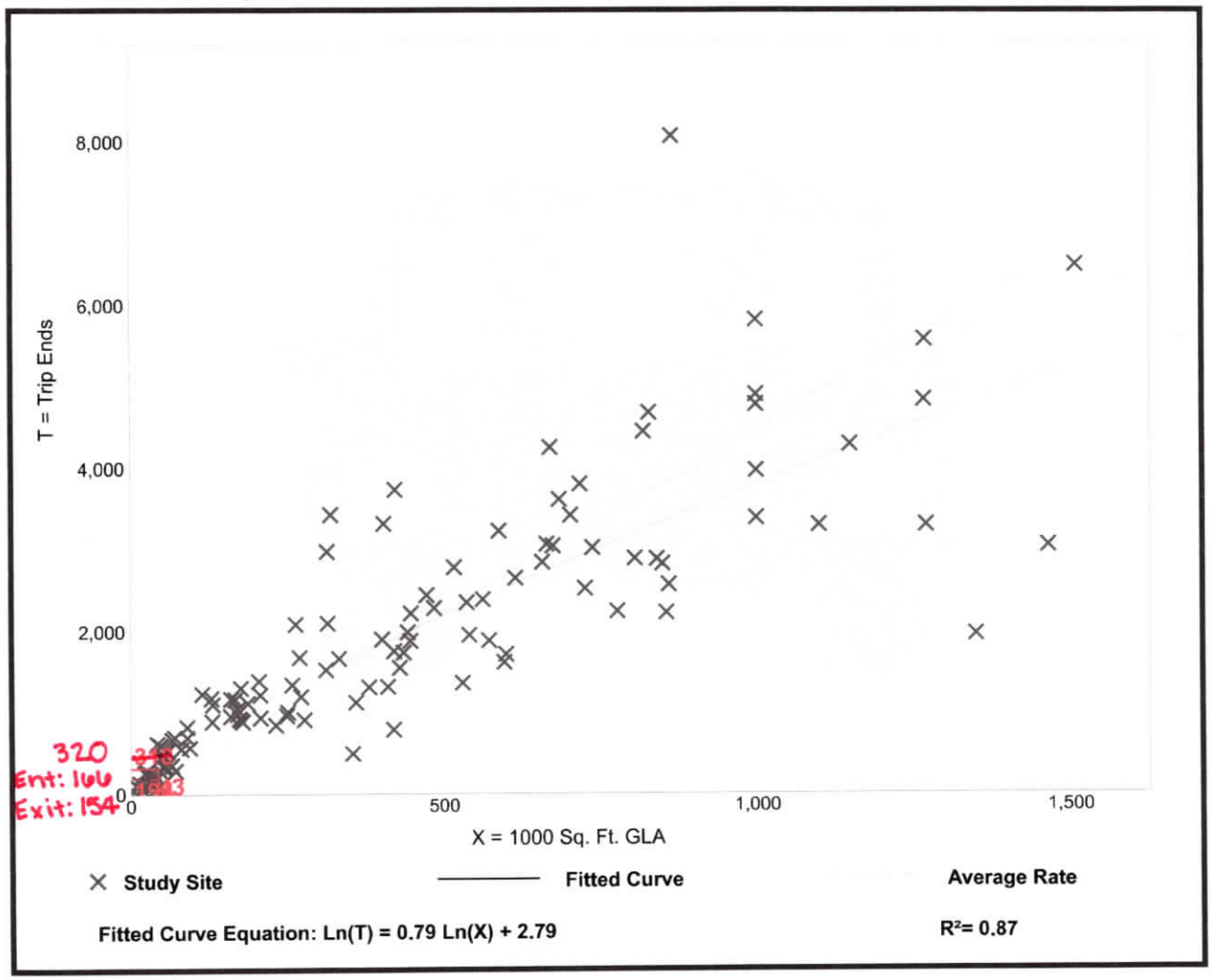
Data Plot and Equation



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Land Use: 934
Fast-Food Restaurant with Drive-Through Window

Description

This category includes fast-food restaurants with drive-through windows. This type of restaurant is characterized by a large drive-through clientele, long hours of service (some are open for breakfast, all are open for lunch and dinner, some are open late at night or 24 hours a day) and high turnover rates for eat-in customers. These limited-service eating establishments do not provide table service. Non-drive-through patrons generally order at a cash register and pay before they eat. Fast casual restaurant (Land Use 930), high-turnover (sit-down) restaurant (Land Use 932), fast-food restaurant without drive-through window (Land Use 933), and fast-food restaurant with drive-through window and no indoor seating (Land Use 935) are related uses.

Additional Data

Users should exercise caution when applying statistics during the AM peak periods, as the sites contained in the database for this land use may or may not be open for breakfast. In cases where it was confirmed that the sites were not open for breakfast, data for the AM peak hour of the adjacent street traffic were removed from the database.

The outdoor seating area is not included in the overall gross floor area. Therefore, the number of seats may be a more reliable independent variable on which to establish trip generation rates for facilities having significant outdoor seating.

Time-of-day distribution data for this land use for a weekday, Saturday, and Sunday are presented in Appendix A. For the 46 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:45 a.m. and 12:45 p.m. and 12:00 and 1:00 p.m., respectively. For the one dense multi-use urban site with data, the same AM and PM peak hours were observed.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alaska, Alberta (CAN), California, Colorado, Florida, Indiana, Kentucky, Maryland, Massachusetts, Minnesota, Montana, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Dakota, Texas, Vermont, Virginia, Washington, and Wisconsin.

Source Numbers

163, 164, 168, 180, 181, 241, 245, 278, 294, 300, 301, 319, 338, 340, 342, 358, 389, 438, 502, 552, 577, 583, 584, 617, 640, 641, 704, 715, 728, 810, 866, 867, 869, 885, 886, 927, 935, 962, 977

Fast-Food Restaurant with Drive-Through Window
(934)

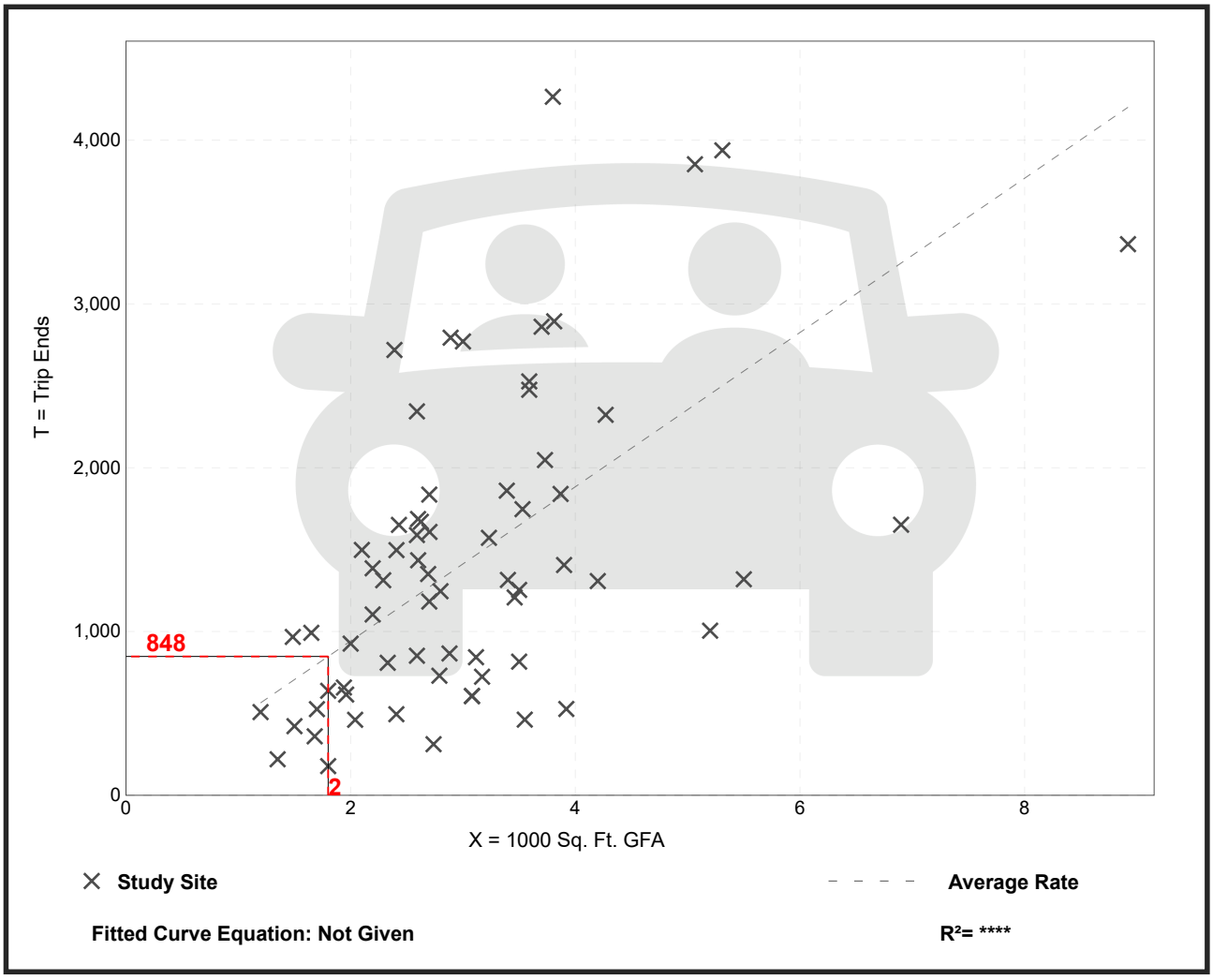
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 67
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
470.95	98.89 - 1137.66	244.44

Data Plot and Equation



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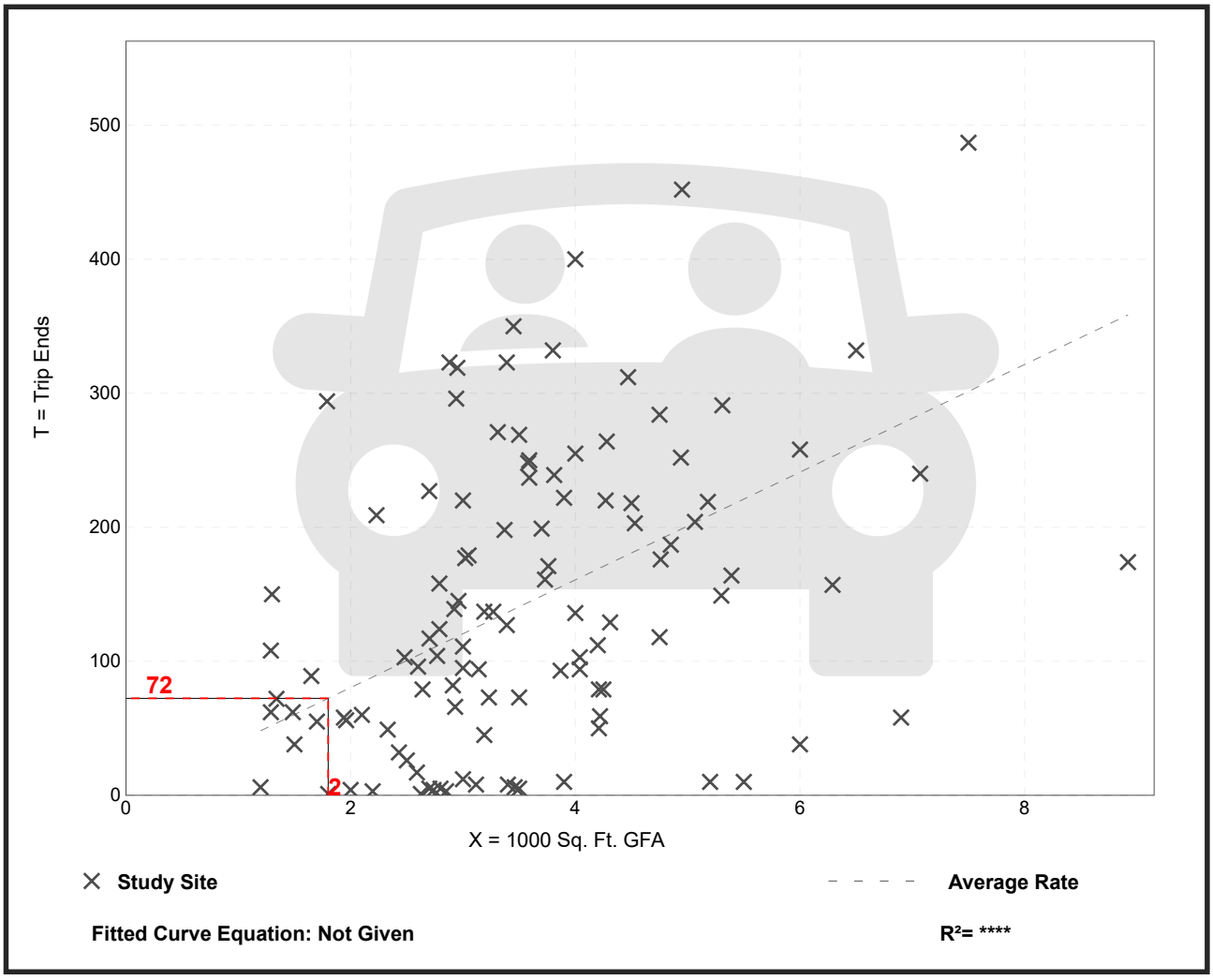
Fast-Food Restaurant with Drive-Through Window
(934)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 111
Avg. 1000 Sq. Ft. GFA: 4
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
40.19	0.38 - 164.25	28.78

Data Plot and Equation



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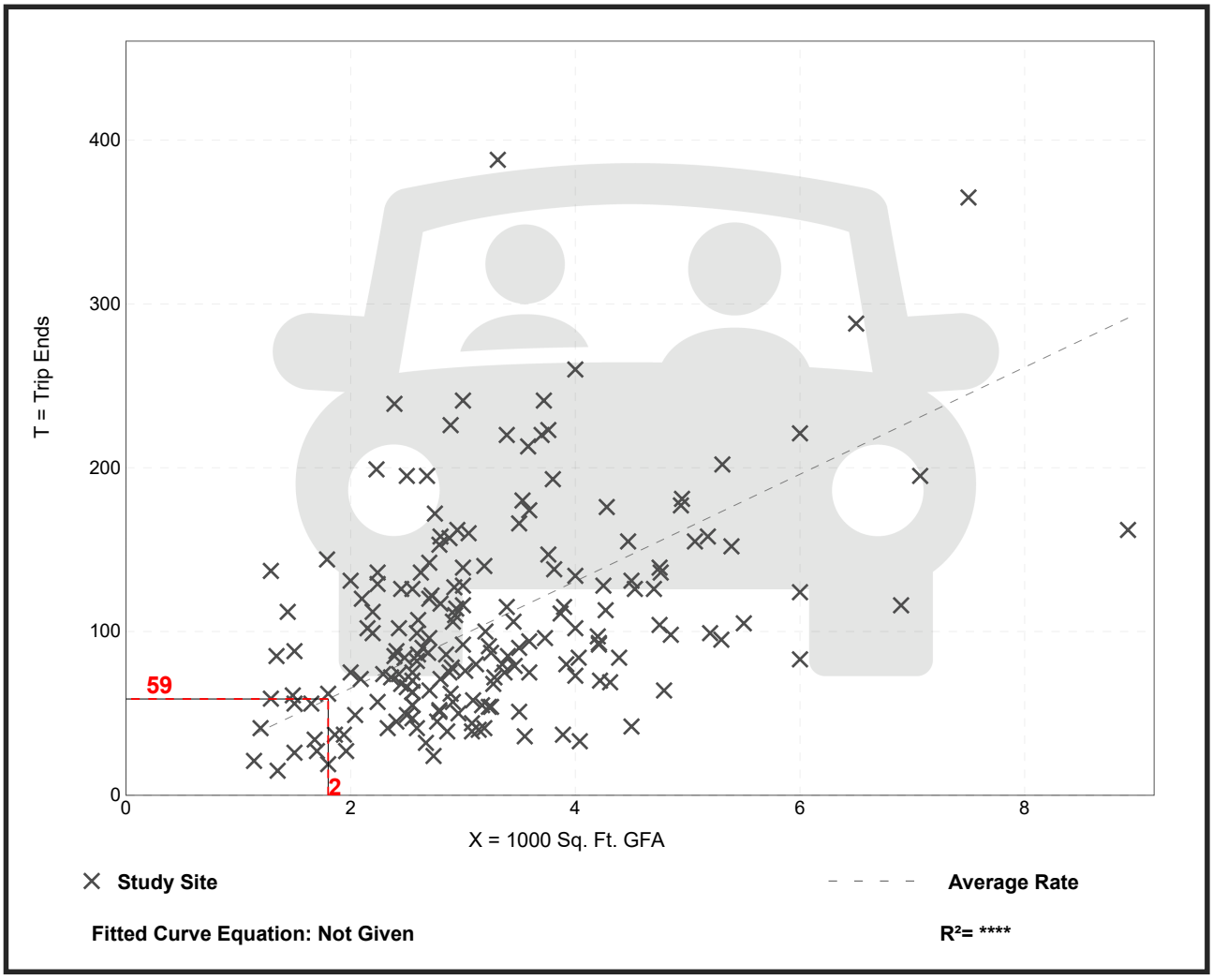
Fast-Food Restaurant with Drive-Through Window
(934)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 185
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
32.67	8.17 - 117.22	17.87

Data Plot and Equation



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Fast-Food Restaurant with Drive-Through Window
(934)

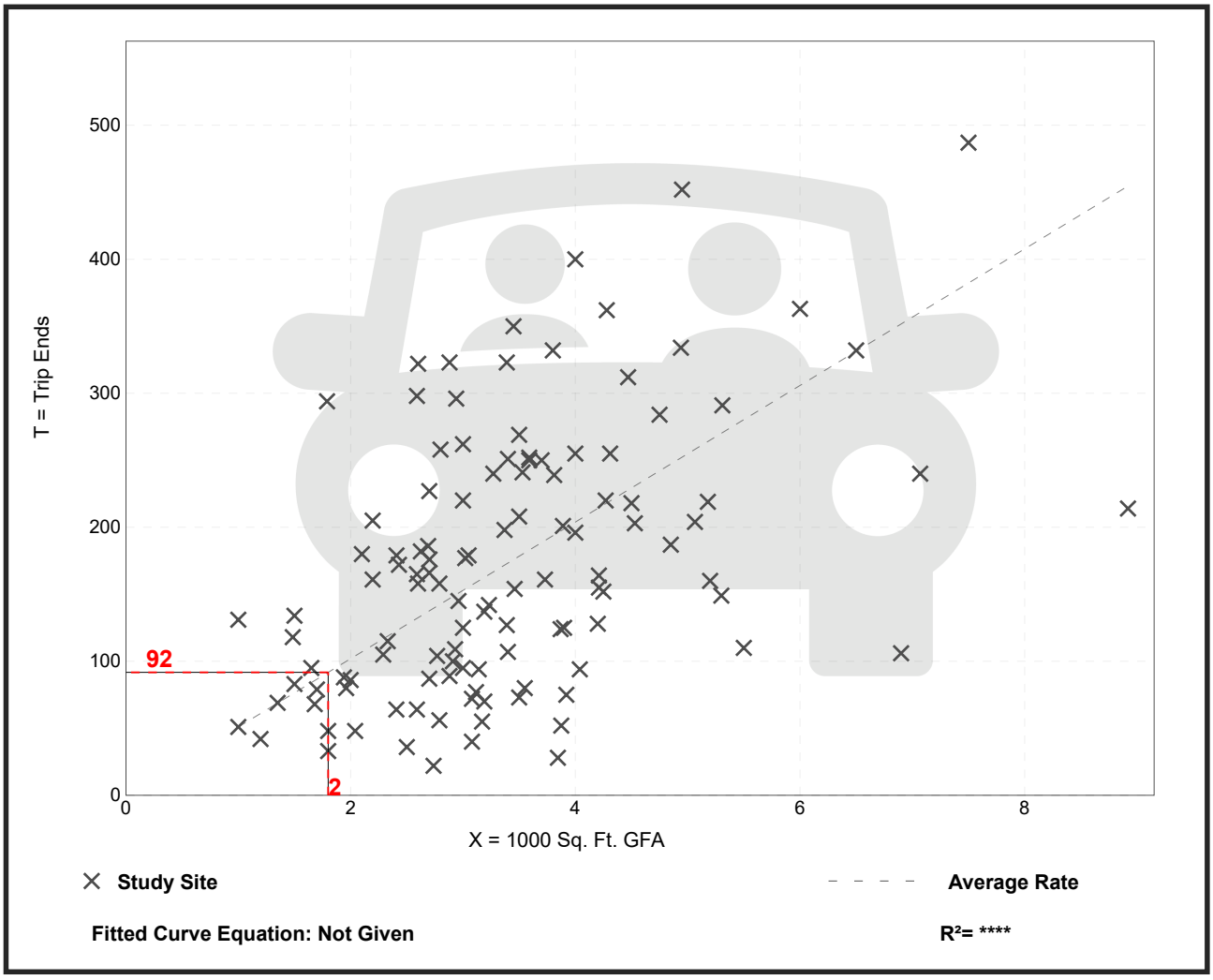
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 117
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
50.97	7.28 - 164.25	26.22

Data Plot and Equation



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Fast-Food Restaurant with Drive-Through Window
(934)

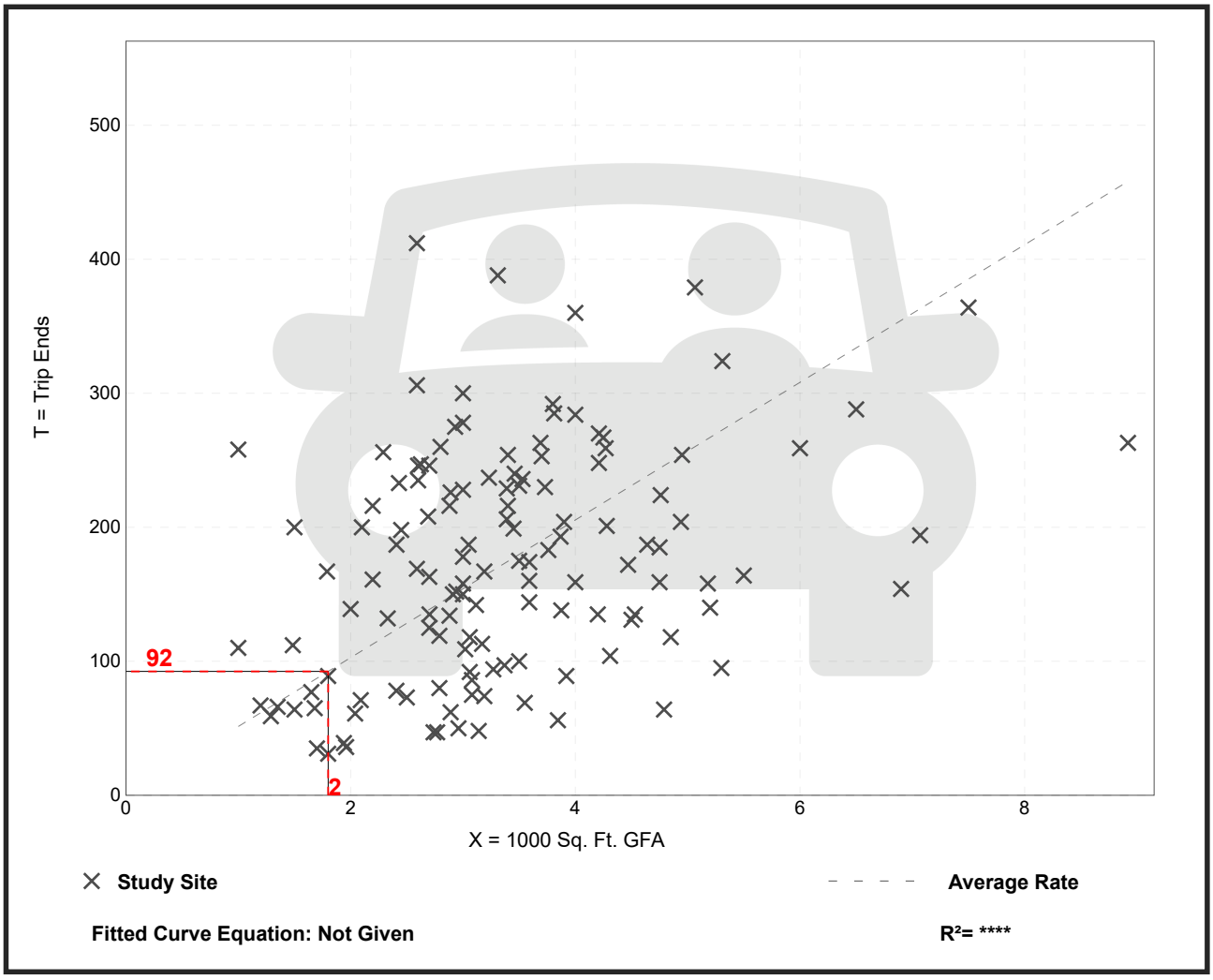
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 132
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
51.36	13.36 - 258.00	27.47

Data Plot and Equation



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Fast-Food Restaurant with Drive-Through Window
(934)

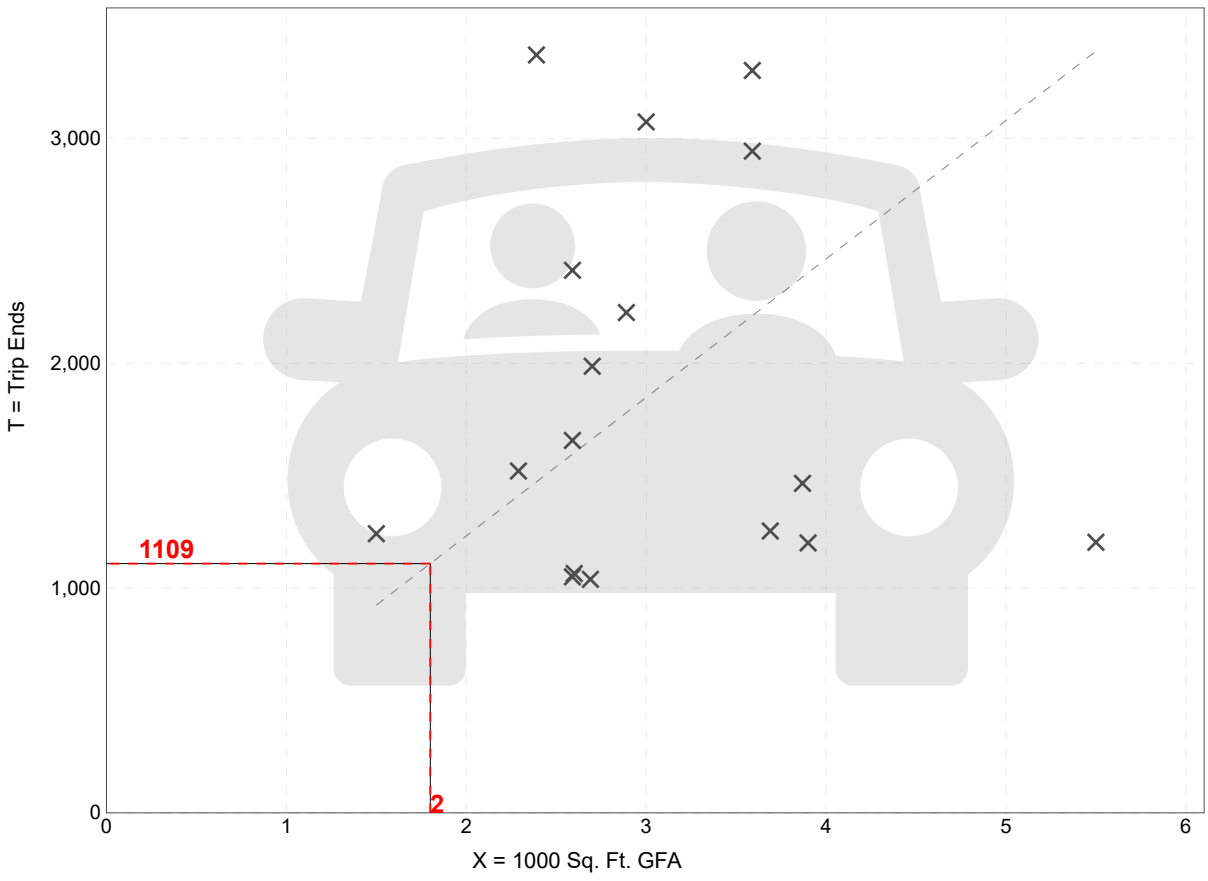
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Saturday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 17
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
616.12	218.91 - 1410.88	320.90

Data Plot and Equation



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Fast-Food Restaurant with Drive-Through Window
(934)

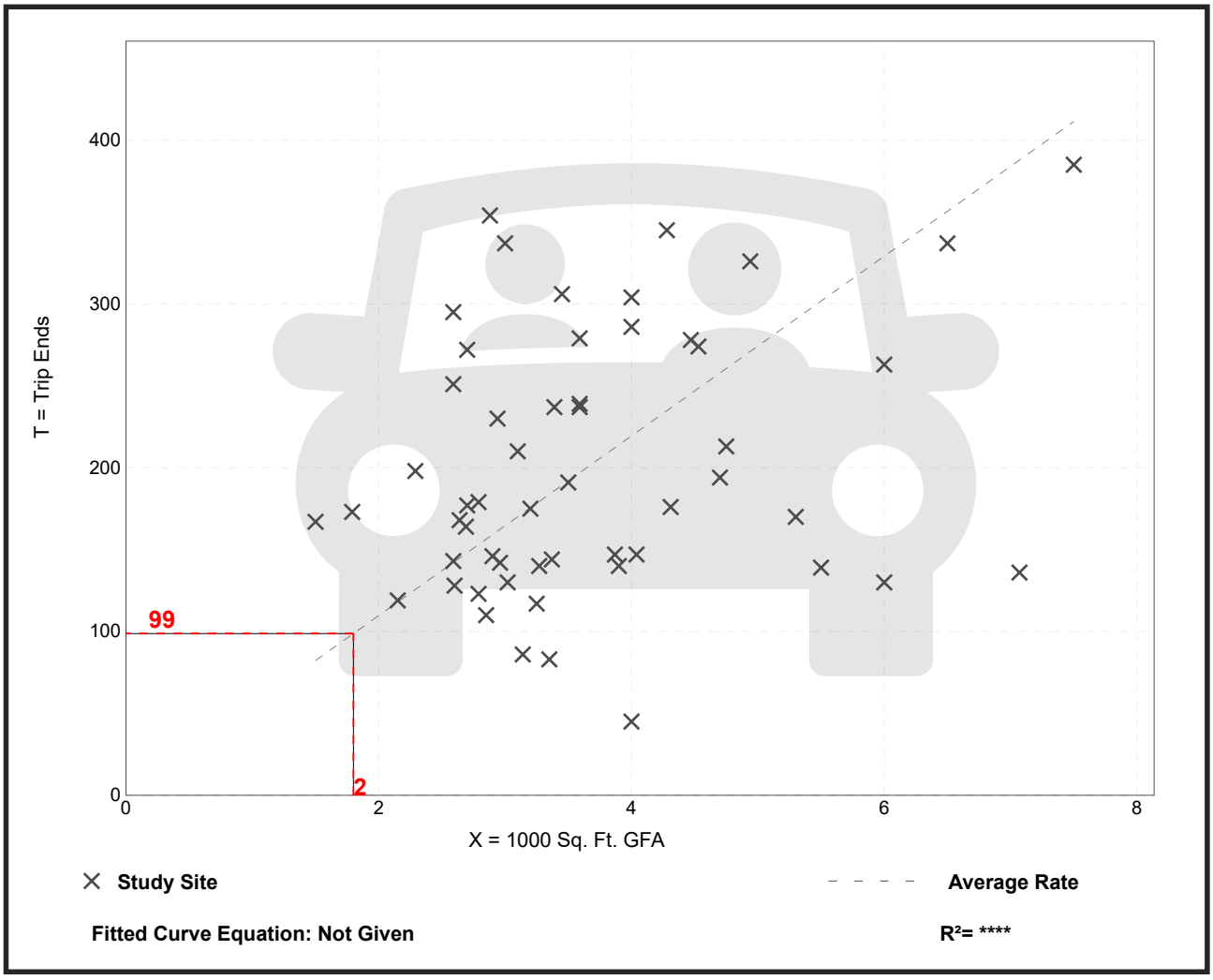
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Saturday, Peak Hour of Generator**

Setting/Location: **General Urban/Suburban**
Number of Studies: 54
Avg. 1000 Sq. Ft. GFA: 4
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
54.86	11.25 - 122.92	24.51

Data Plot and Equation



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Fast-Food Restaurant with Drive-Through Window
(934)

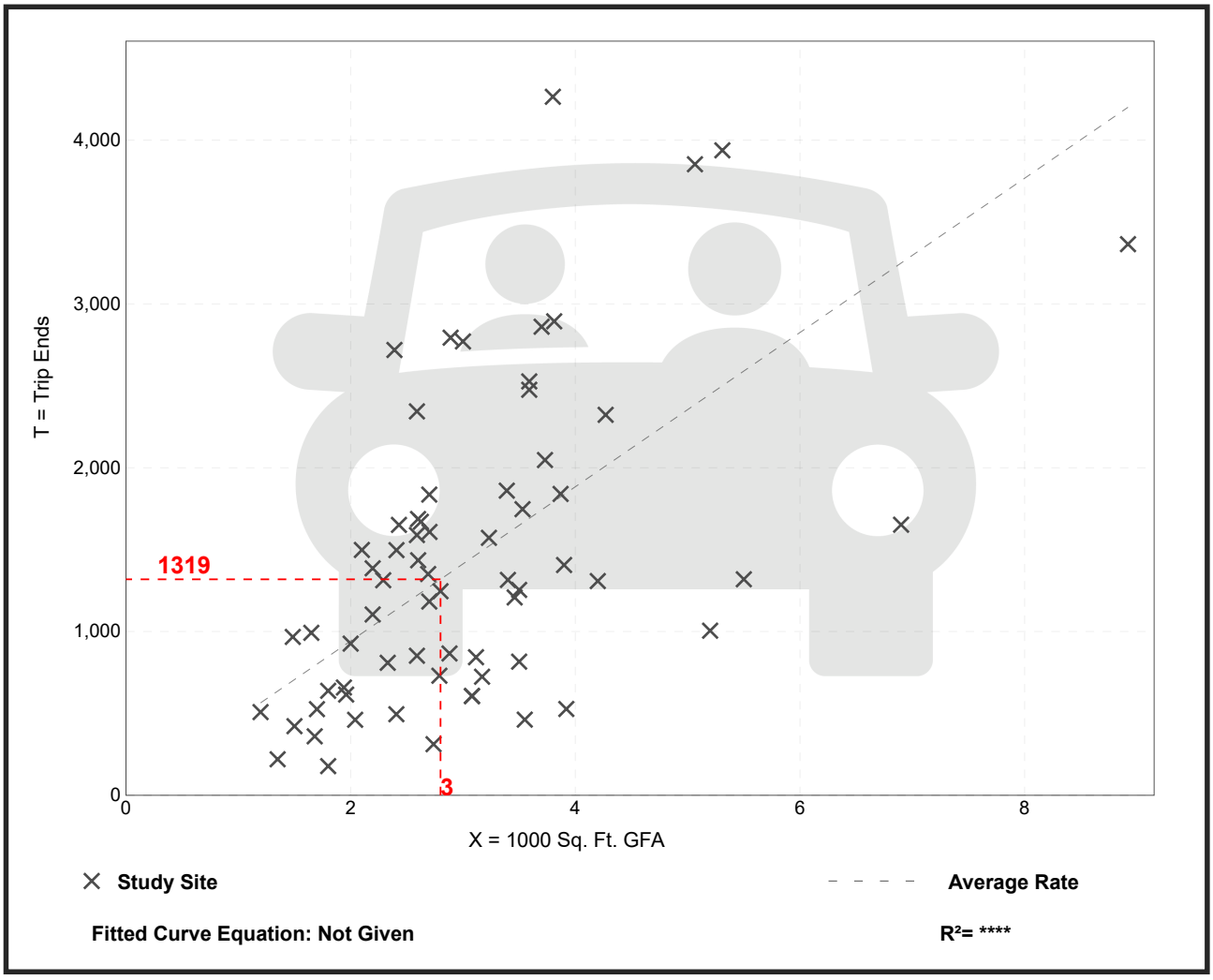
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 67
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
470.95	98.89 - 1137.66	244.44

Data Plot and Equation



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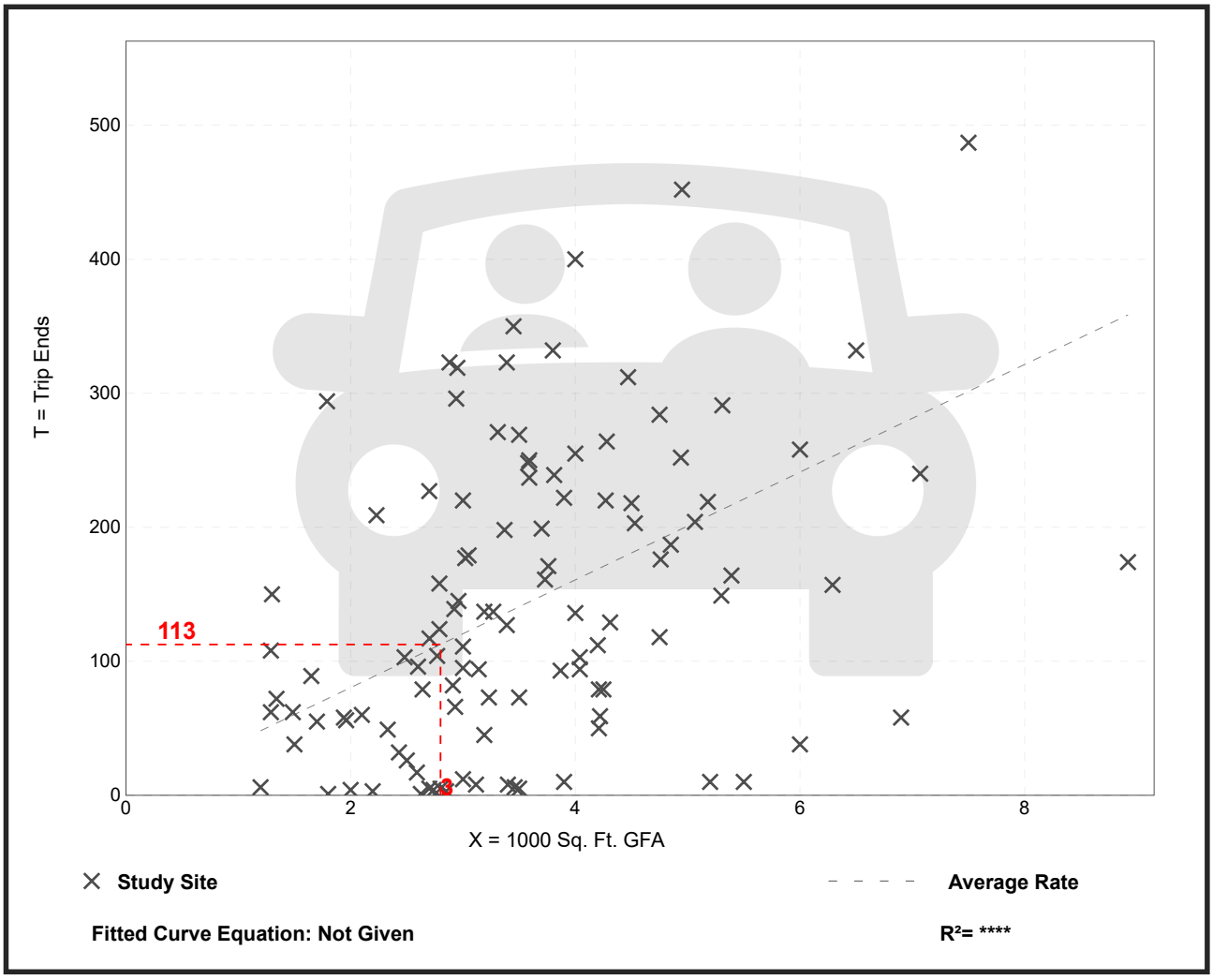
Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
40.19	0.38 - 164.25	28.78

Data Plot and Equation



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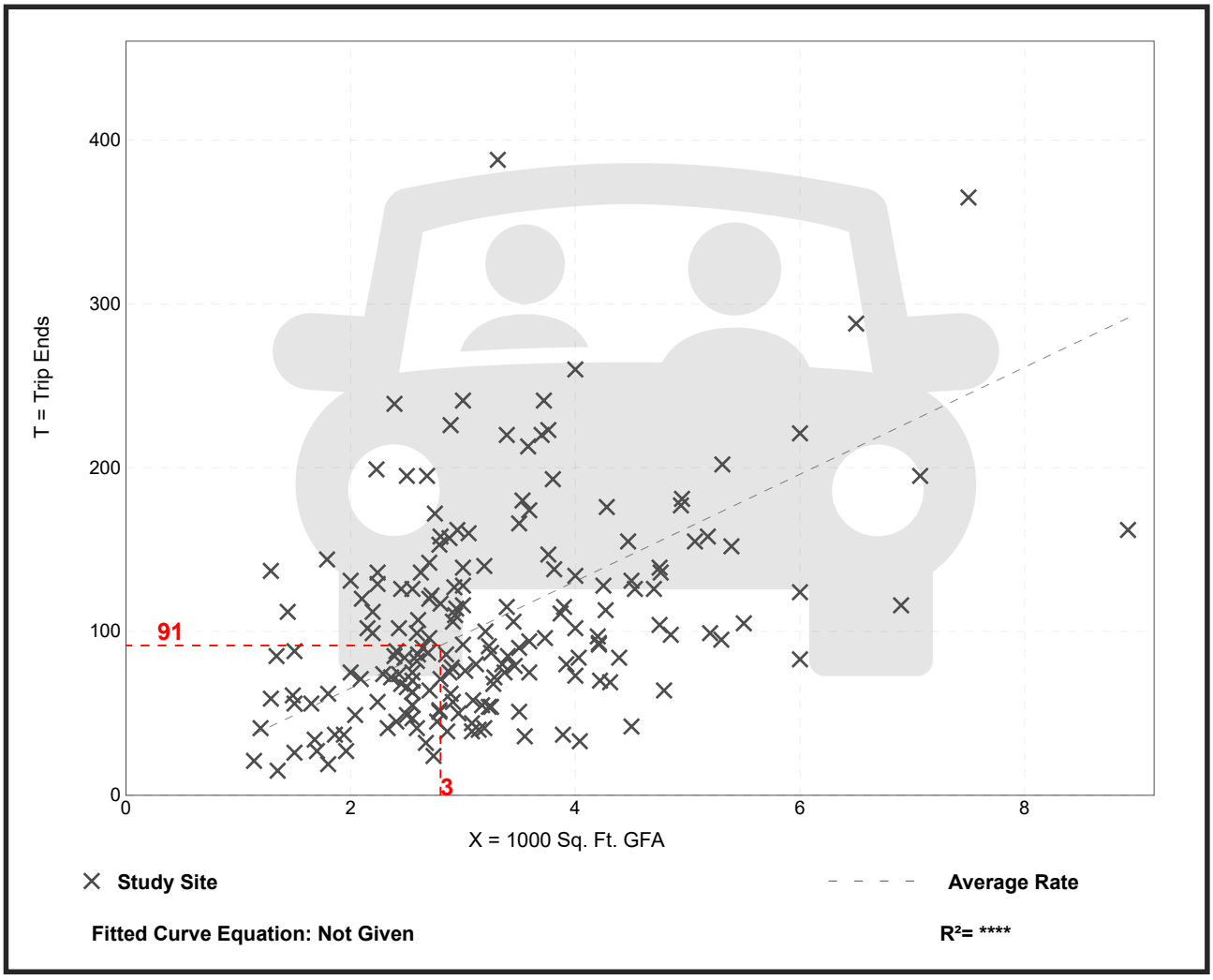
Fast-Food Restaurant with Drive-Through Window
(934)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 185
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
32.67	8.17 - 117.22	17.87

Data Plot and Equation



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Fast-Food Restaurant with Drive-Through Window
(934)

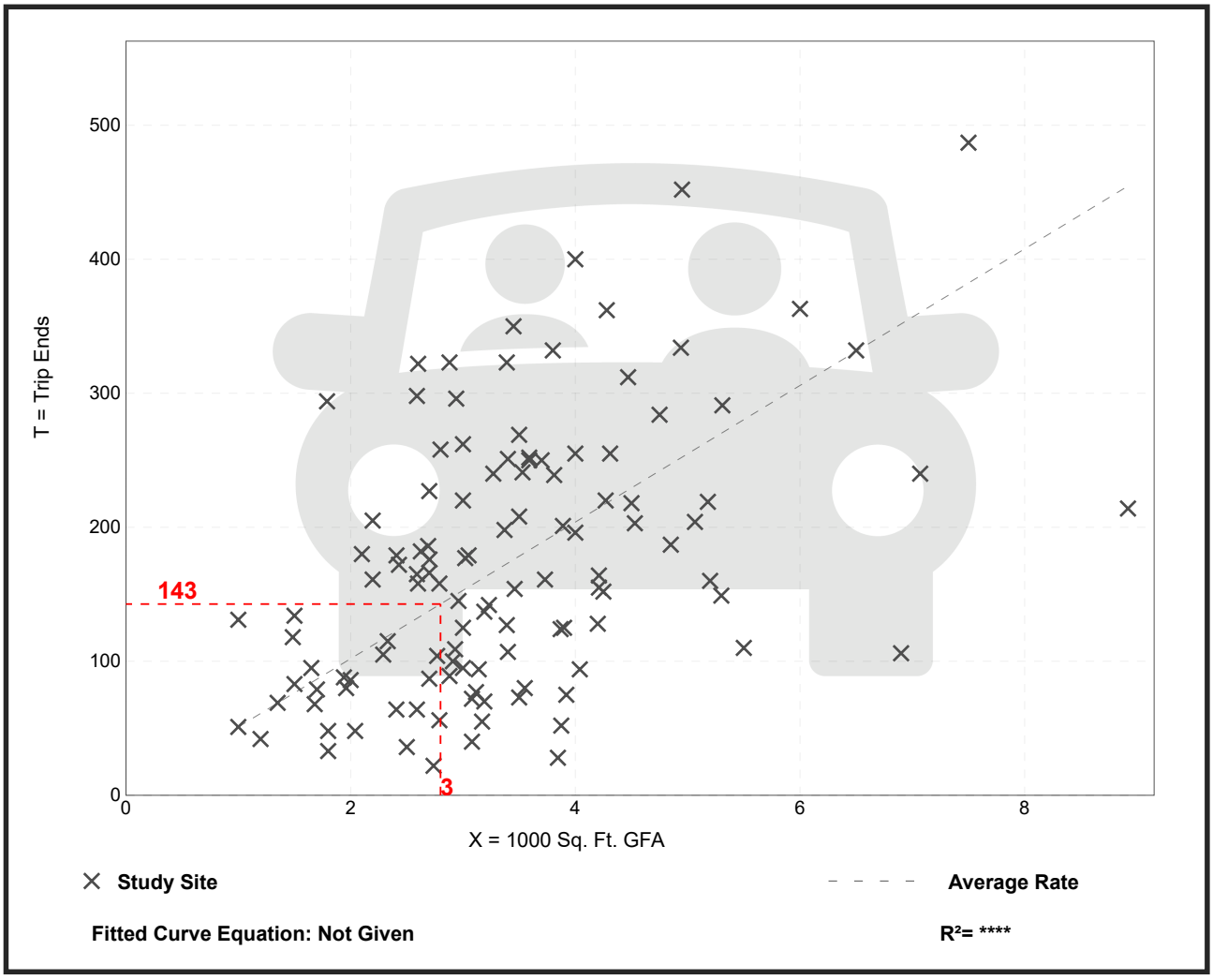
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 117
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
50.97	7.28 - 164.25	26.22

Data Plot and Equation



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Fast-Food Restaurant with Drive-Through Window
(934)

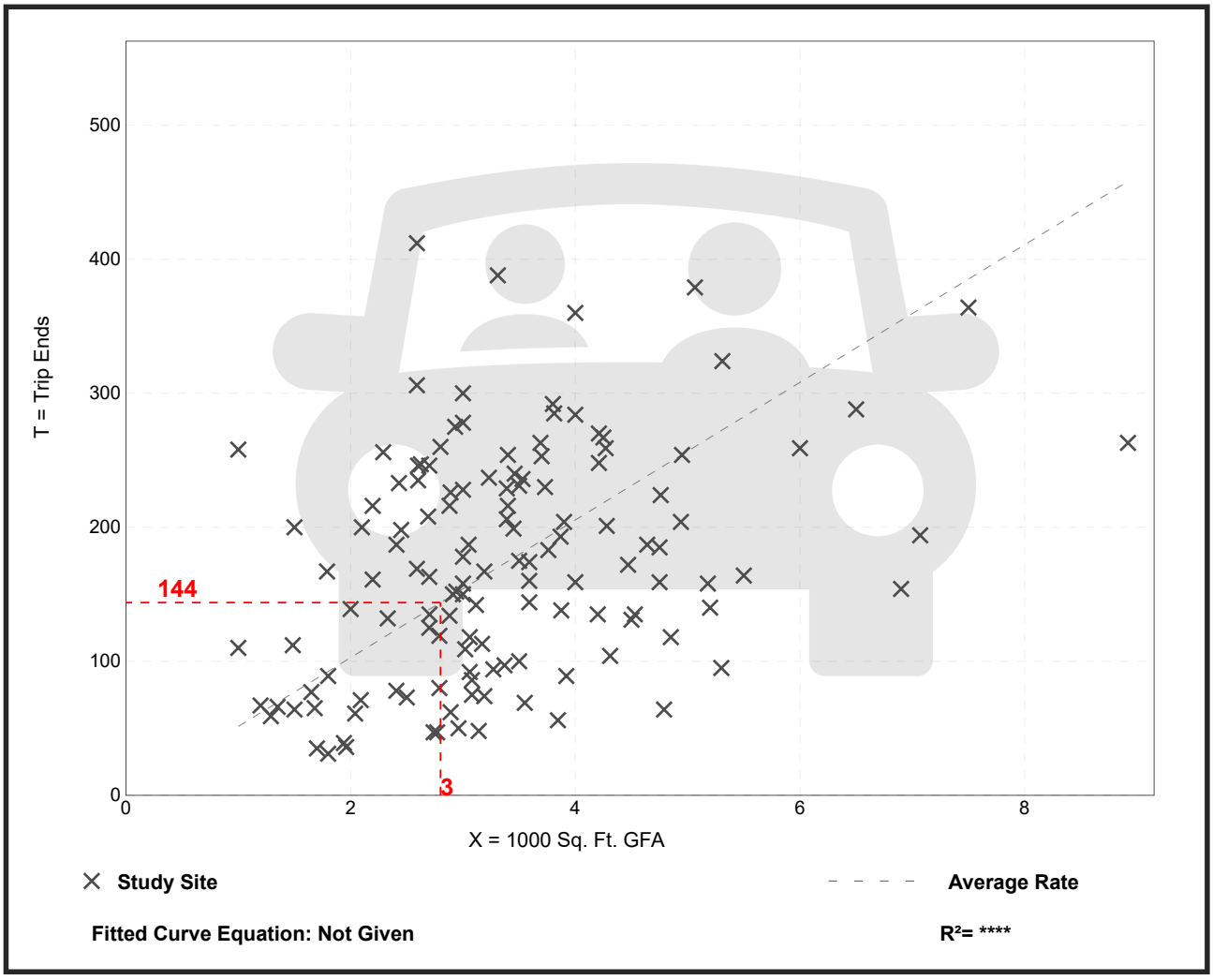
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 132
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
51.36	13.36 - 258.00	27.47

Data Plot and Equation



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Fast-Food Restaurant with Drive-Through Window
(934)

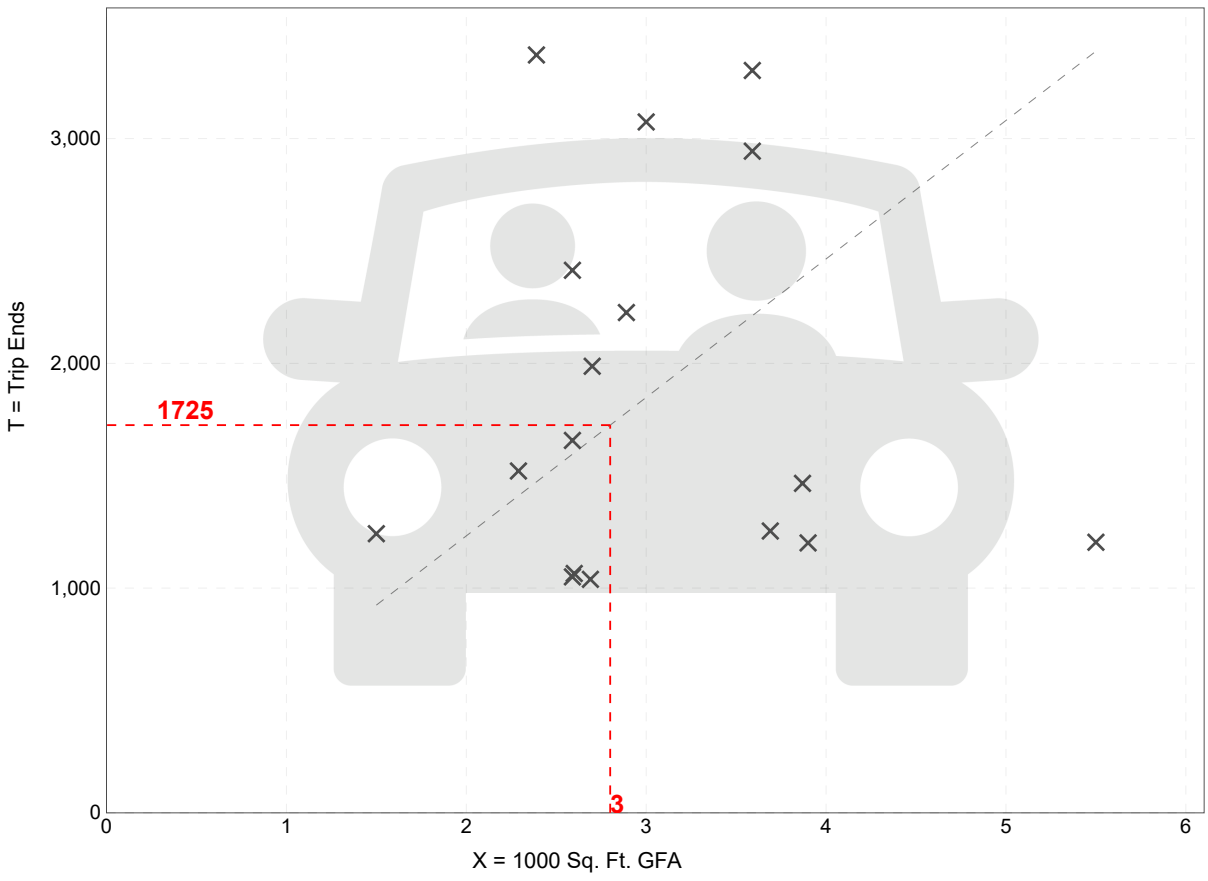
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Saturday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 17
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
616.12	218.91 - 1410.88	320.90

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= **

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Fast-Food Restaurant with Drive-Through Window
(934)

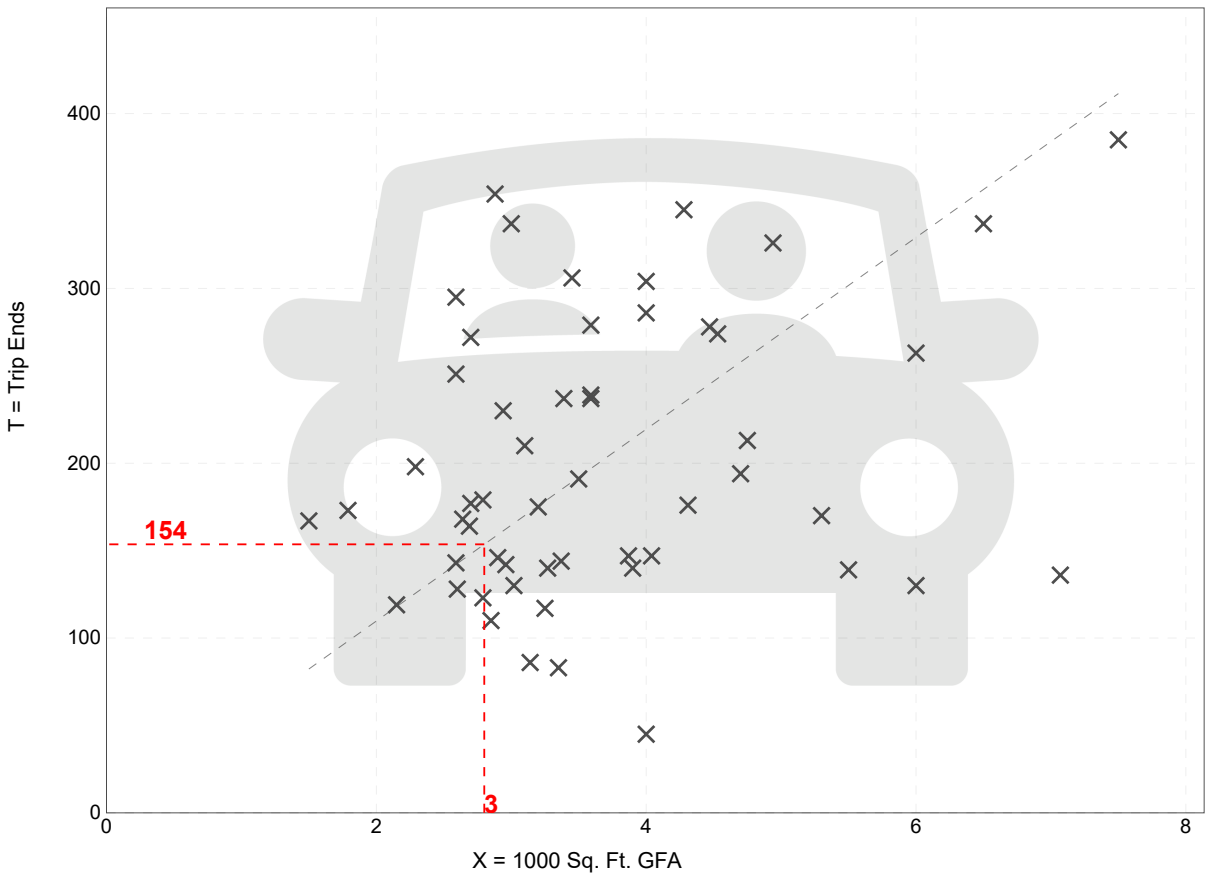
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Saturday, Peak Hour of Generator**

Setting/Location: **General Urban/Suburban**
Number of Studies: 54
Avg. 1000 Sq. Ft. GFA: 4
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
54.86	11.25 - 122.92	24.51

Data Plot and Equation



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Fast-Food Restaurant with Drive-Through Window
(934)

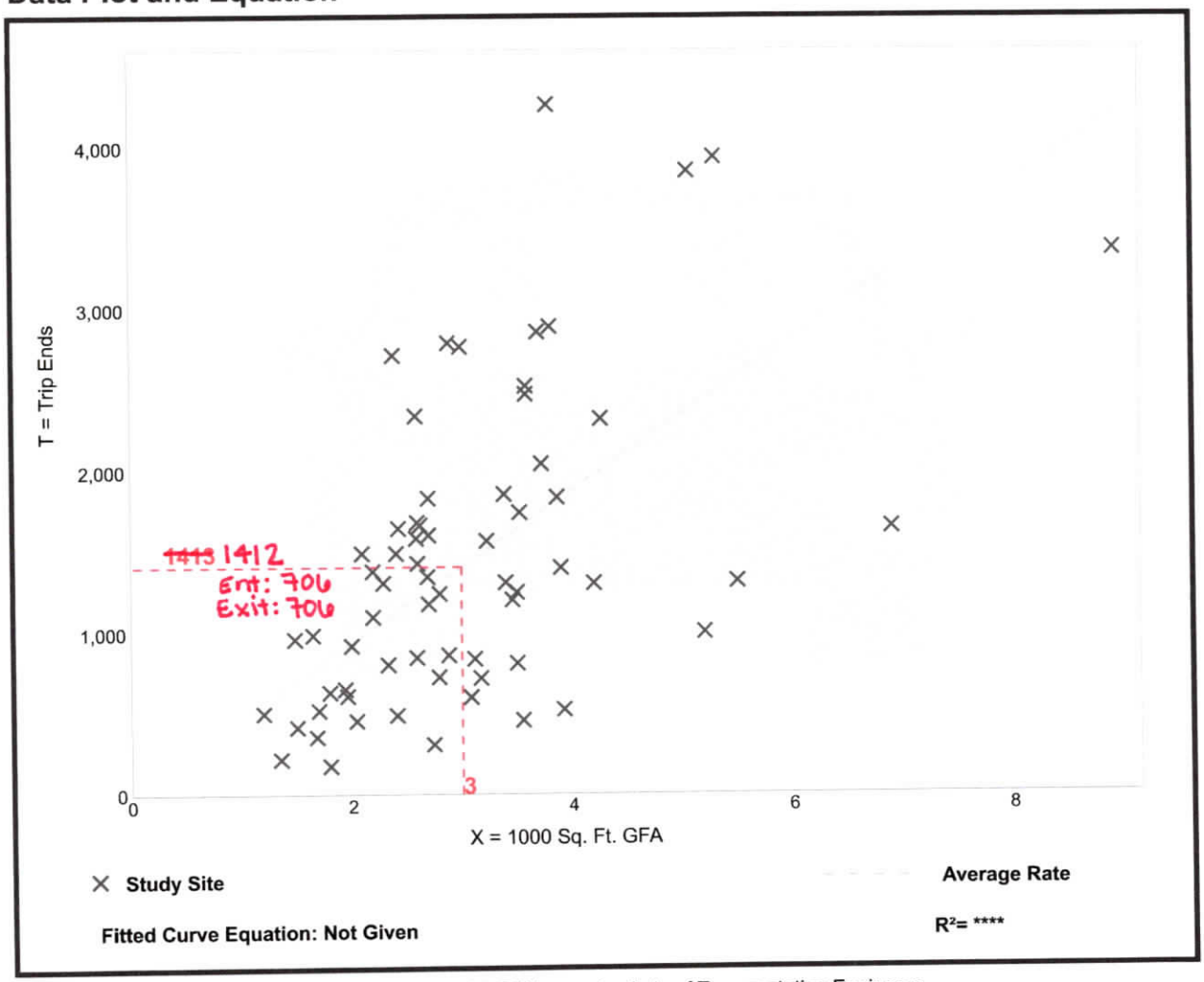
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 67
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
470.95	98.89 - 1137.66	244.44

Data Plot and Equation



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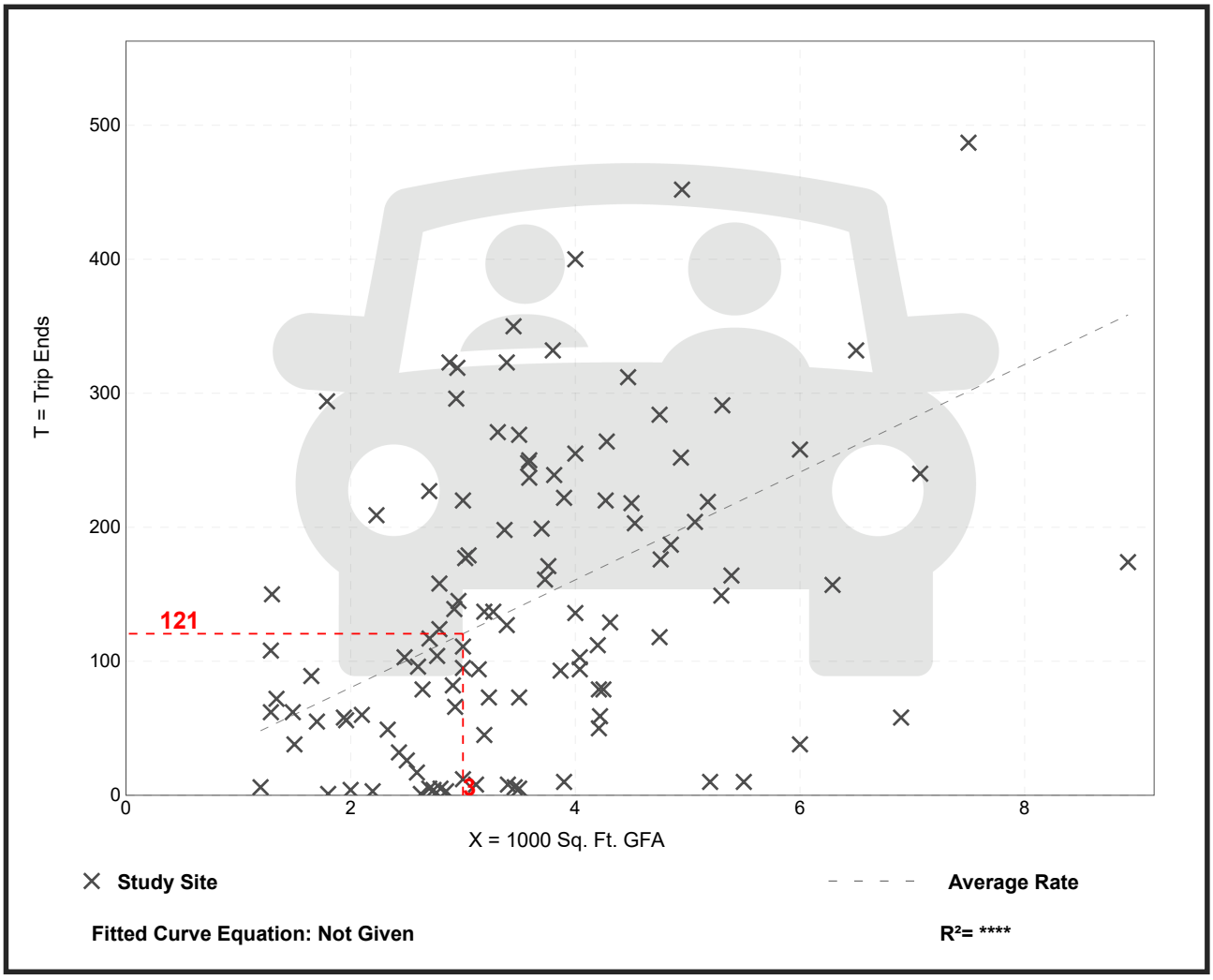
Fast-Food Restaurant with Drive-Through Window
(934)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 111
Avg. 1000 Sq. Ft. GFA: 4
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
40.19	0.38 - 164.25	28.78

Data Plot and Equation



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Fast-Food Restaurant with Drive-Through Window
(934)

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On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 185
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 52% entering, 48% exiting

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Average Rate	Range of Rates	Standard Deviation
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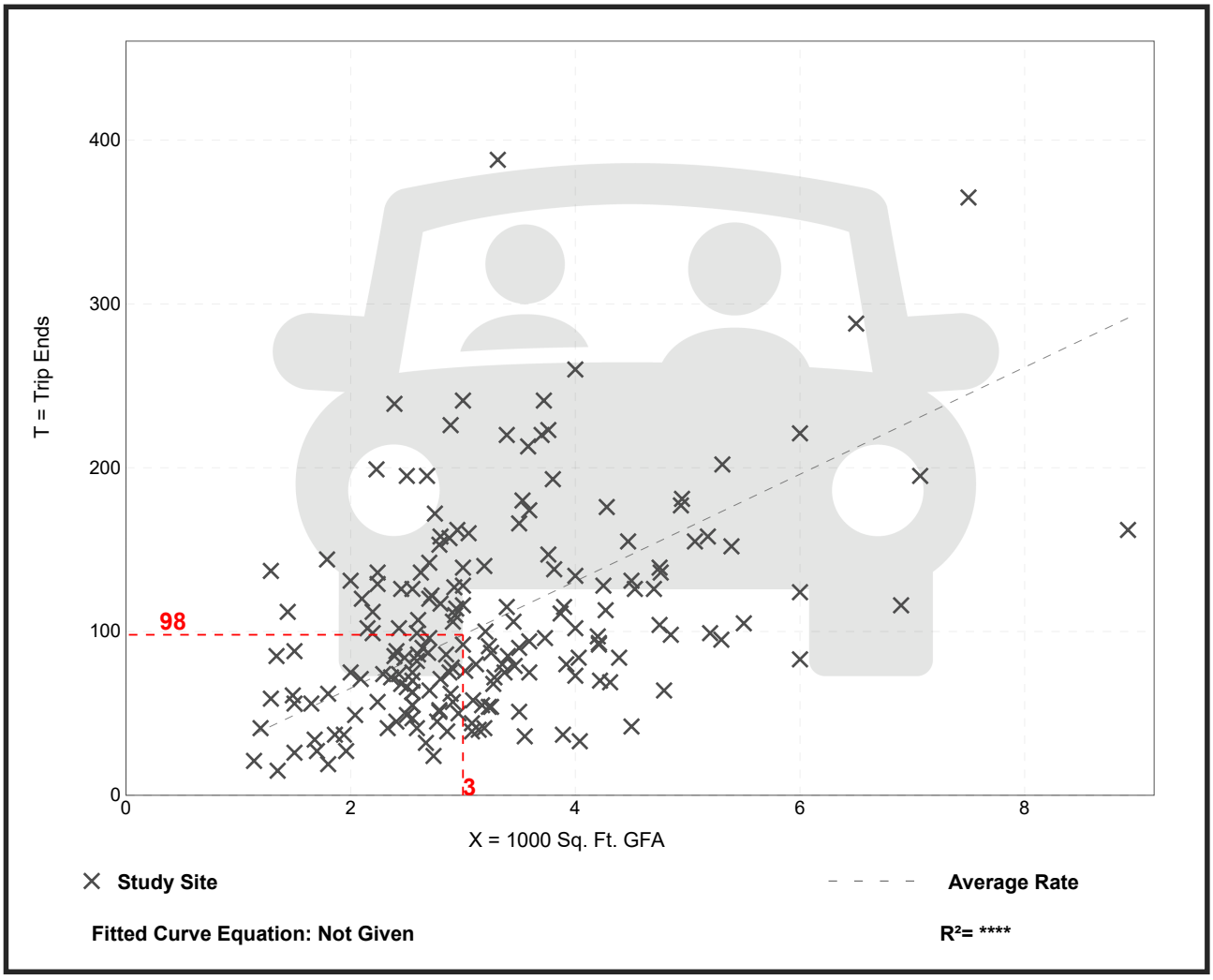

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Fast-Food Restaurant with Drive-Through Window
(934)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 117
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
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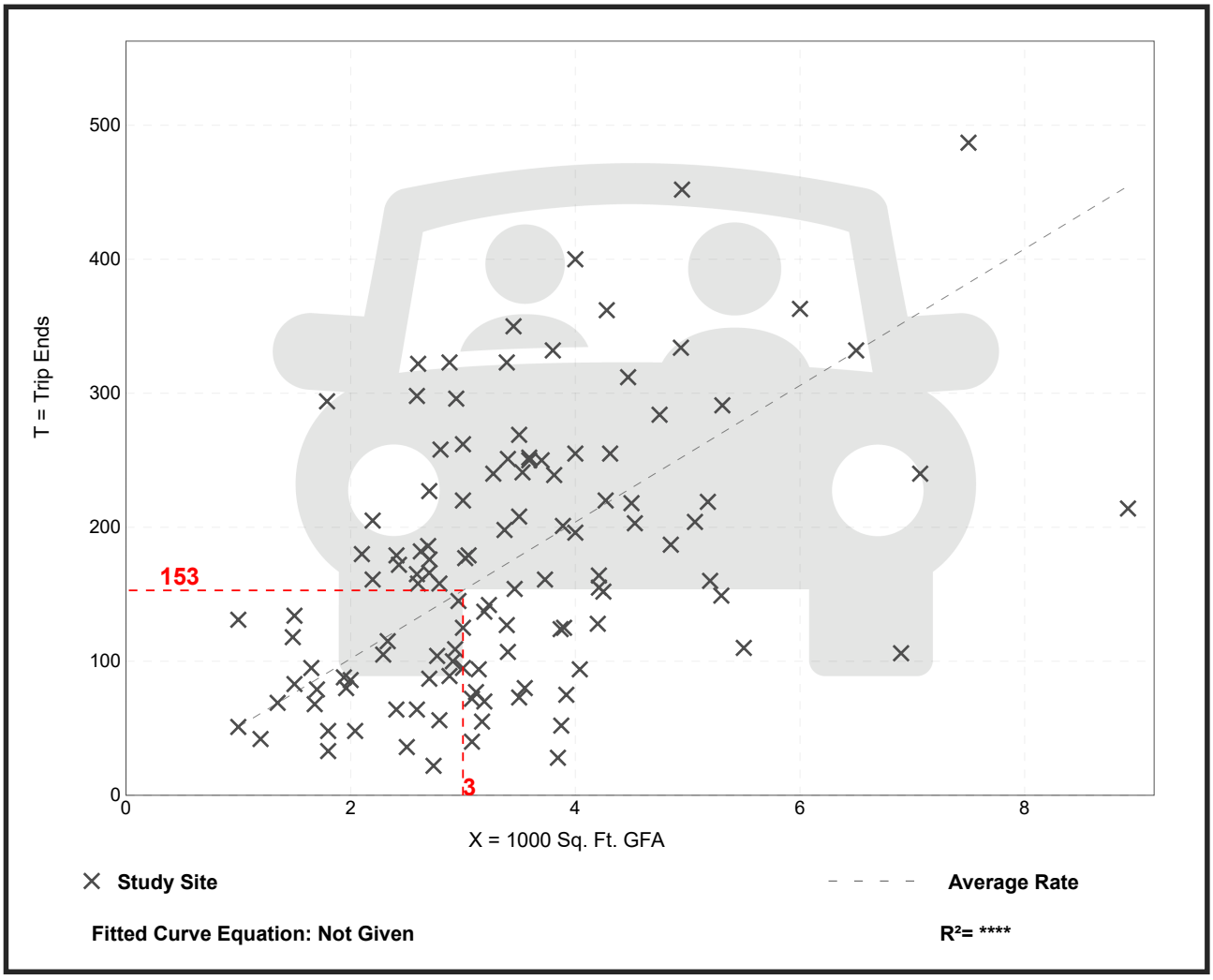
Data Plot and Equation



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Fast-Food Restaurant with Drive-Through Window
(934)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 132
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
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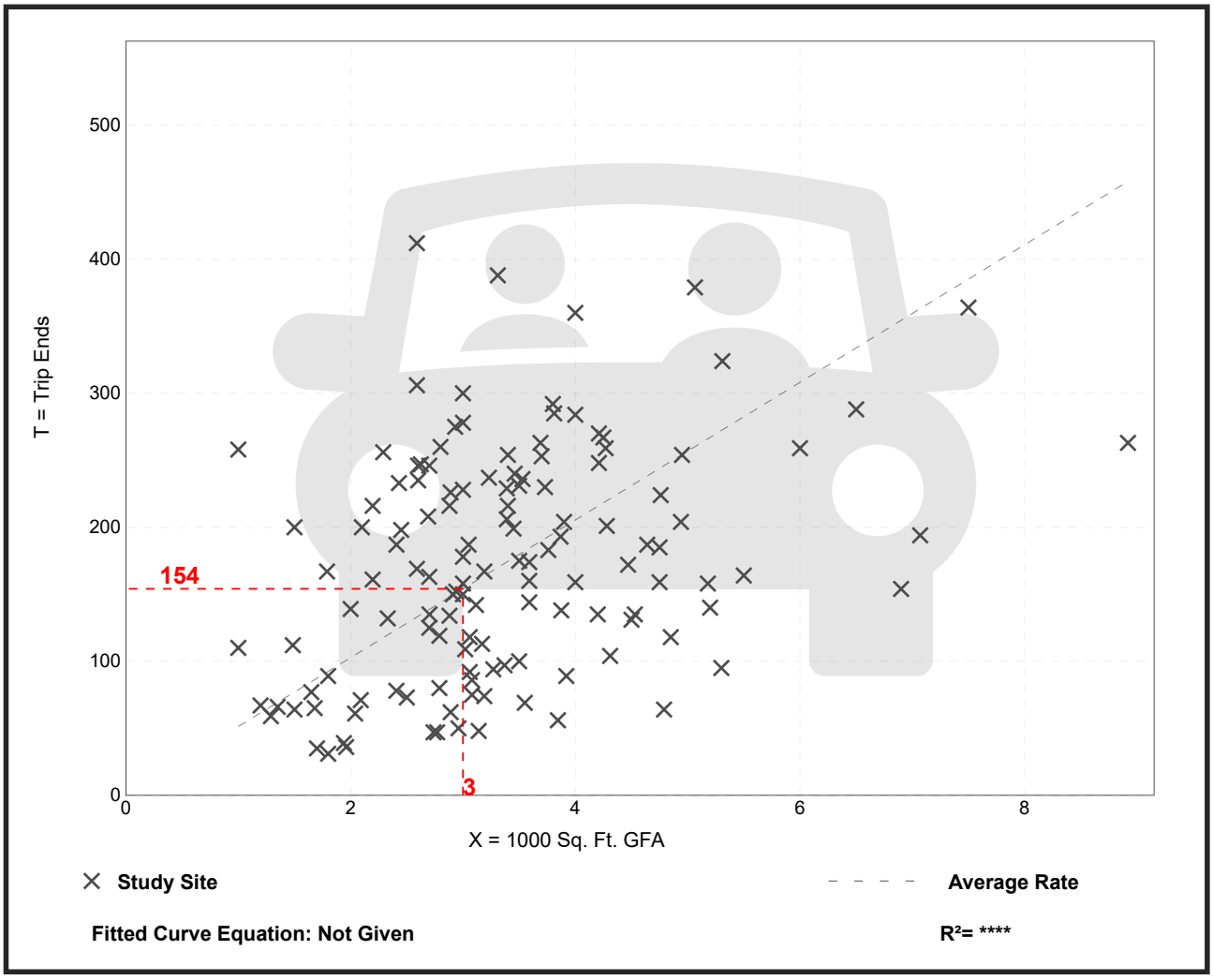

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Fast-Food Restaurant with Drive-Through Window
(934)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Saturday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 17
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
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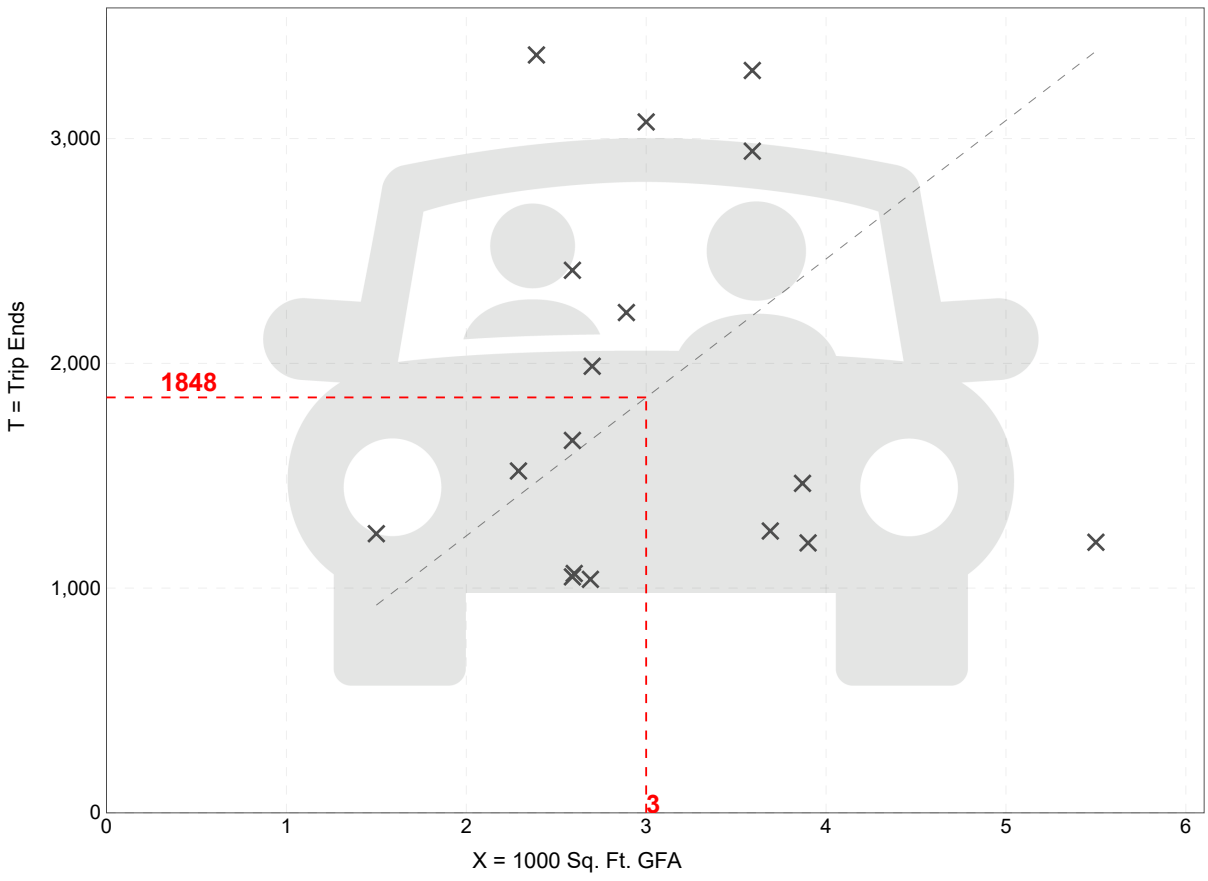
Data Plot and Equation



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Fast-Food Restaurant with Drive-Through Window
(934)

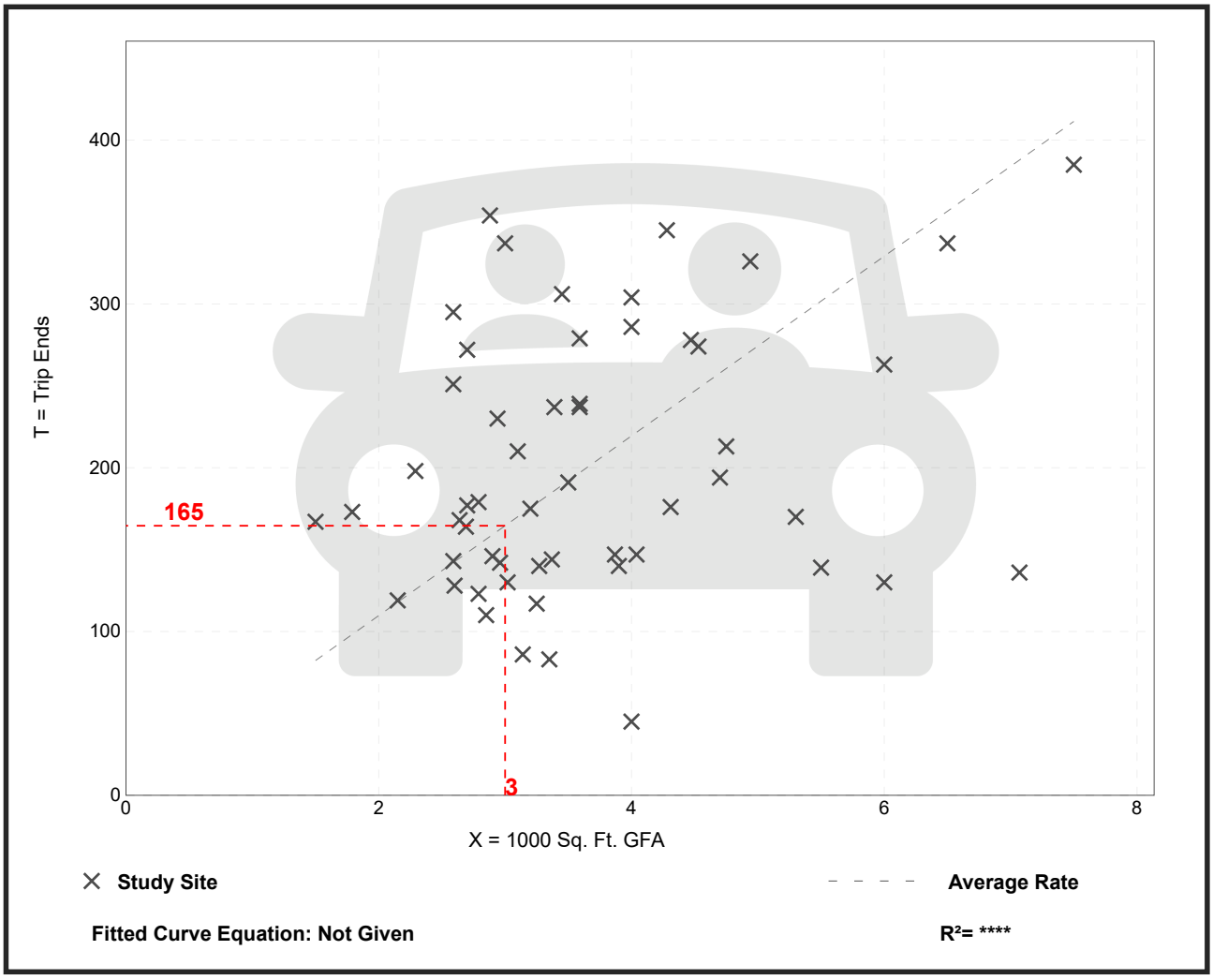
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Saturday, Peak Hour of Generator**

Setting/Location: **General Urban/Suburban**
Number of Studies: 54
Avg. 1000 Sq. Ft. GFA: 4
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
54.86	11.25 - 122.92	24.51

Data Plot and Equation



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Land Use: 960
Super Convenience Market/Gas Station

Description

This land use includes gasoline/service stations with convenience markets where there is significant business related to the sale of convenience items and the fueling of motor vehicles. Some commonly sold convenience items include newspapers, freshly brewed coffee, daily-made donuts, bakery items, hot and cold beverages, breakfast items, dairy items, fresh fruits, soups, light meals, ready-to-go and freshly made sandwiches and wraps, and ready-to-go salads. Stores typically also had automated teller machines (ATMs), and public restrooms. The sites included in this land use category have the following two specific characteristics:

- The gross floor area of the convenience market is at least 3,000 gross square feet
- The number of vehicle fueling positions is at least 10

Convenience market with gasoline pumps (Land Use 853) and gasoline/service station with convenience market (Land Use 945) are related uses.

Additional Data

To reflect changing characteristics of the convenience market component of this land use, only data from the past two decades have been included in this land use.

The independent variable, vehicle fueling positions, is defined as the maximum number of vehicles that can be fueled simultaneously. Gasoline/service stations in this land use include “pay-at-the-pump” and traditional fueling stations.

A multi-variable regression analysis based on both the convenience market gross floor area (GFA) and the number of vehicle fueling positions (VFP) produced a series of fitted curve equations. The equations are in the form of:

Vehicle Trips = [(VFP Factor) x (Number of VFP)] + [(GFA Factor) x (GFA)] + (Constant)

The values for the VFP factor, GFA factor, and constant are presented in the following table for each time period for which a fitted curve equation could produce an R^2 value of at least 0.50.

Time Period	VFP Factor	GFA Factor	Constant	R^2
Weekday, AM Peak Hour of Generator	10.3	105	-290	0.62
Weekday, PM Peak Hour of Generator	6.91	76.0	-133	0.68
Weekday, AM Peak Hour of Adjacent Street	16.1	135	-483	0.66
Weekday, PM Peak Hour of Adjacent Street	11.5	82.9	-226	0.51

The sites were surveyed in the late 1990’s, 2000s and the 2010s in Florida, Iowa, Maryland, Minnesota, New Hampshire, New Jersey, Pennsylvania, Texas, Utah, and Wisconsin.

Source Numbers

617, 813, 844, 850, 864, 865, 867, 869, 882, 888, 904, 938, 954, 960, 962

Super Convenience Market/Gas Station
(960)

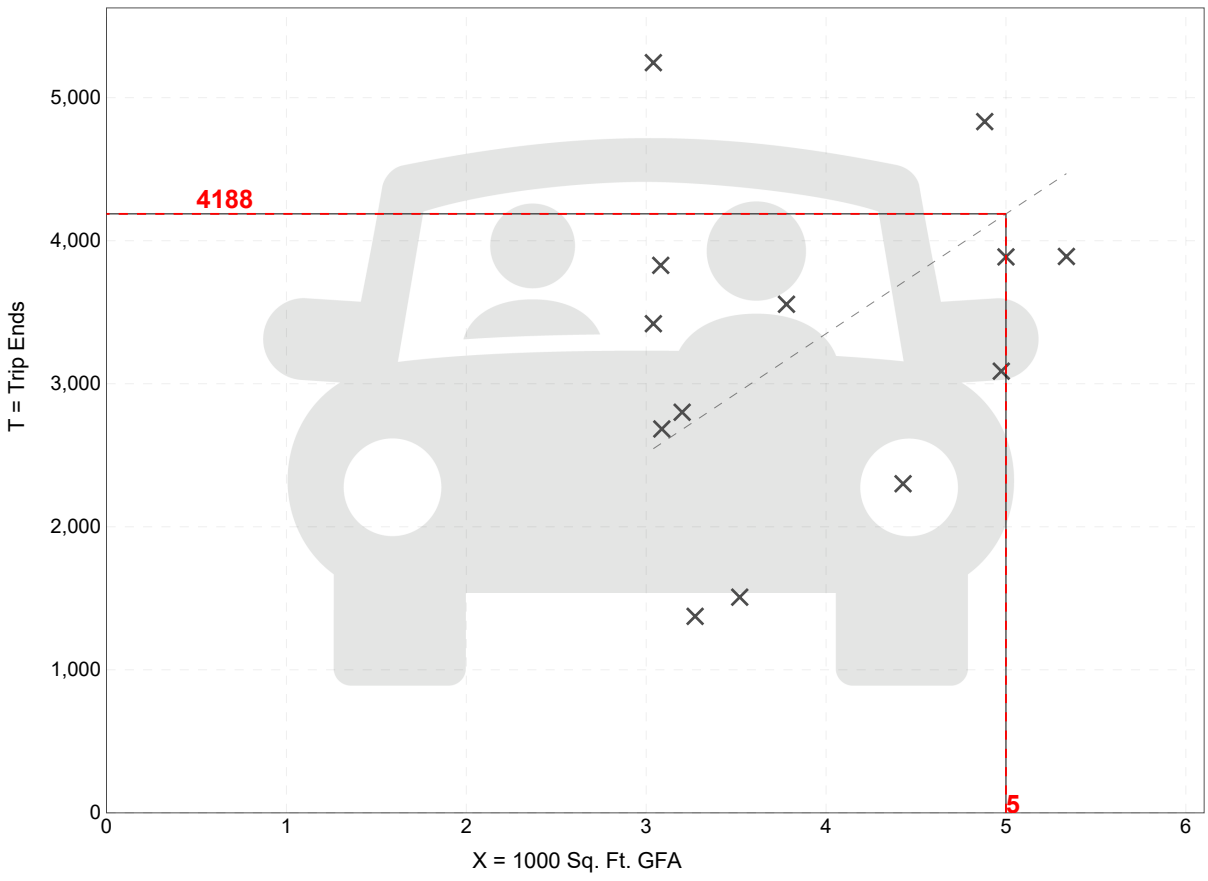
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 13
Avg. 1000 Sq. Ft. GFA: 4
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
837.58	419.93 - 1725.33	334.67

Data Plot and Equation



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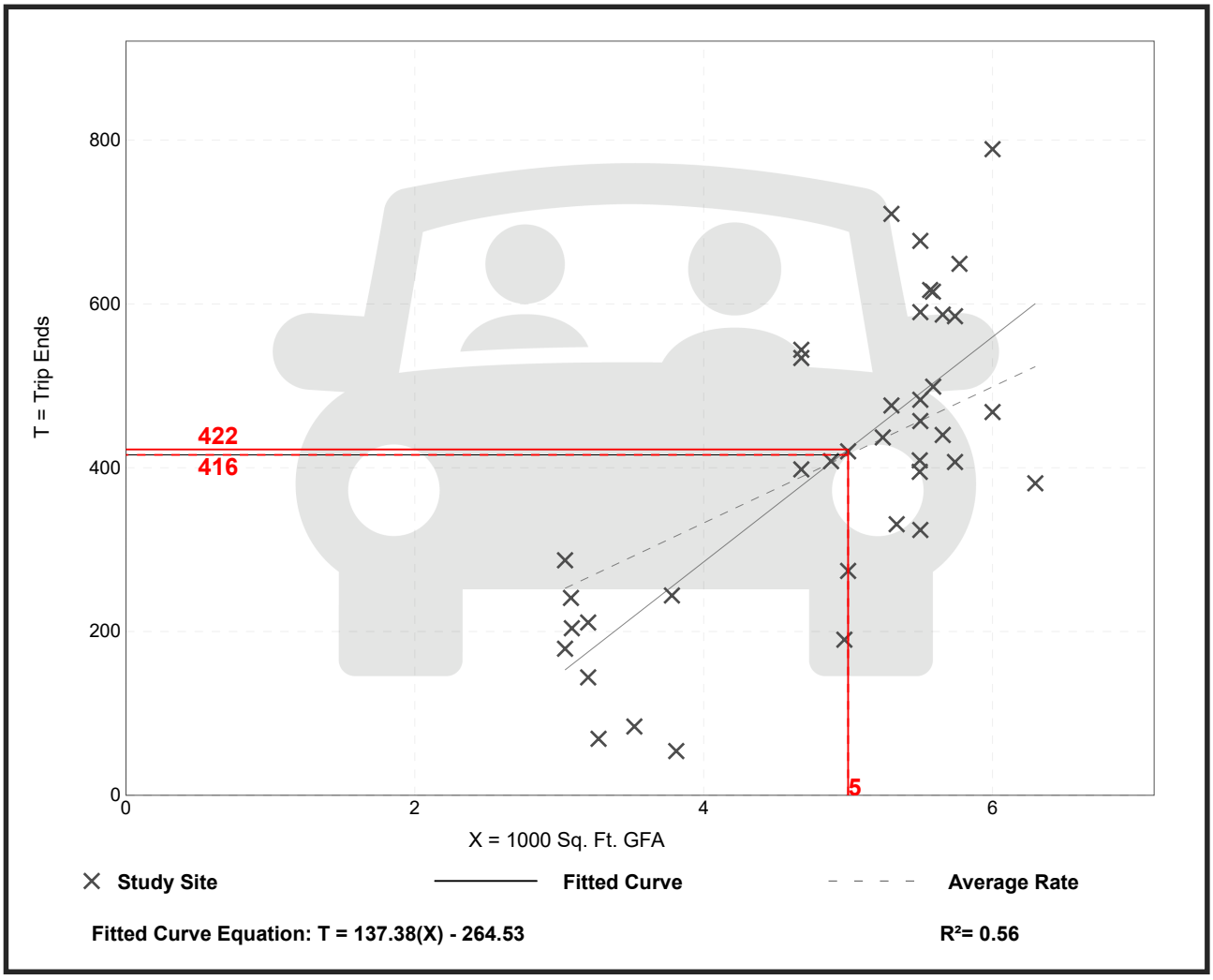
Super Convenience Market/Gas Station
(960)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 39
Avg. 1000 Sq. Ft. GFA: 5
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
83.14	14.17 - 133.96	28.07

Data Plot and Equation



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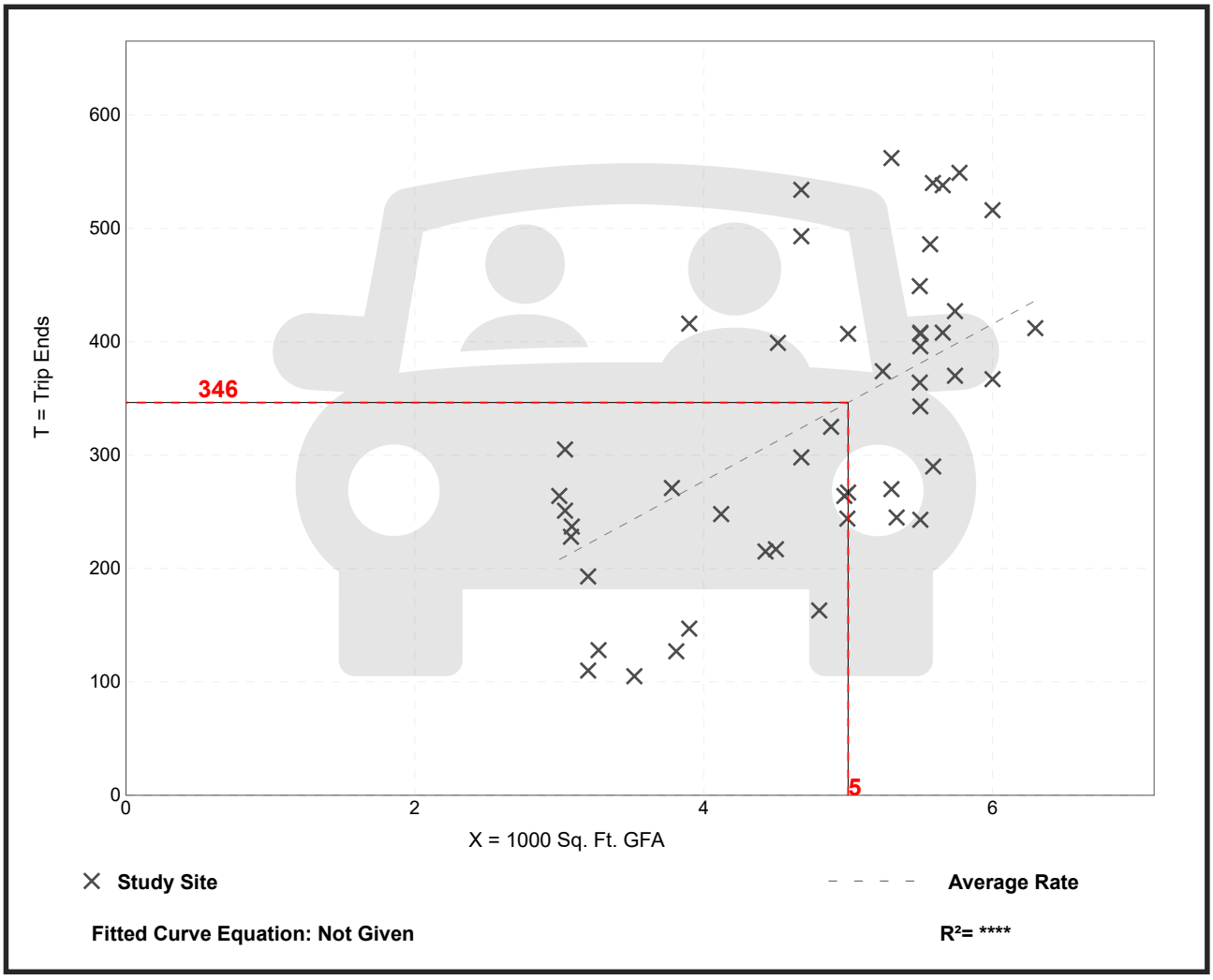
Super Convenience Market/Gas Station
(960)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 48
Avg. 1000 Sq. Ft. GFA: 5
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
69.28	29.83 - 114.20	21.07

Data Plot and Equation



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Super Convenience Market/Gas Station
(960)

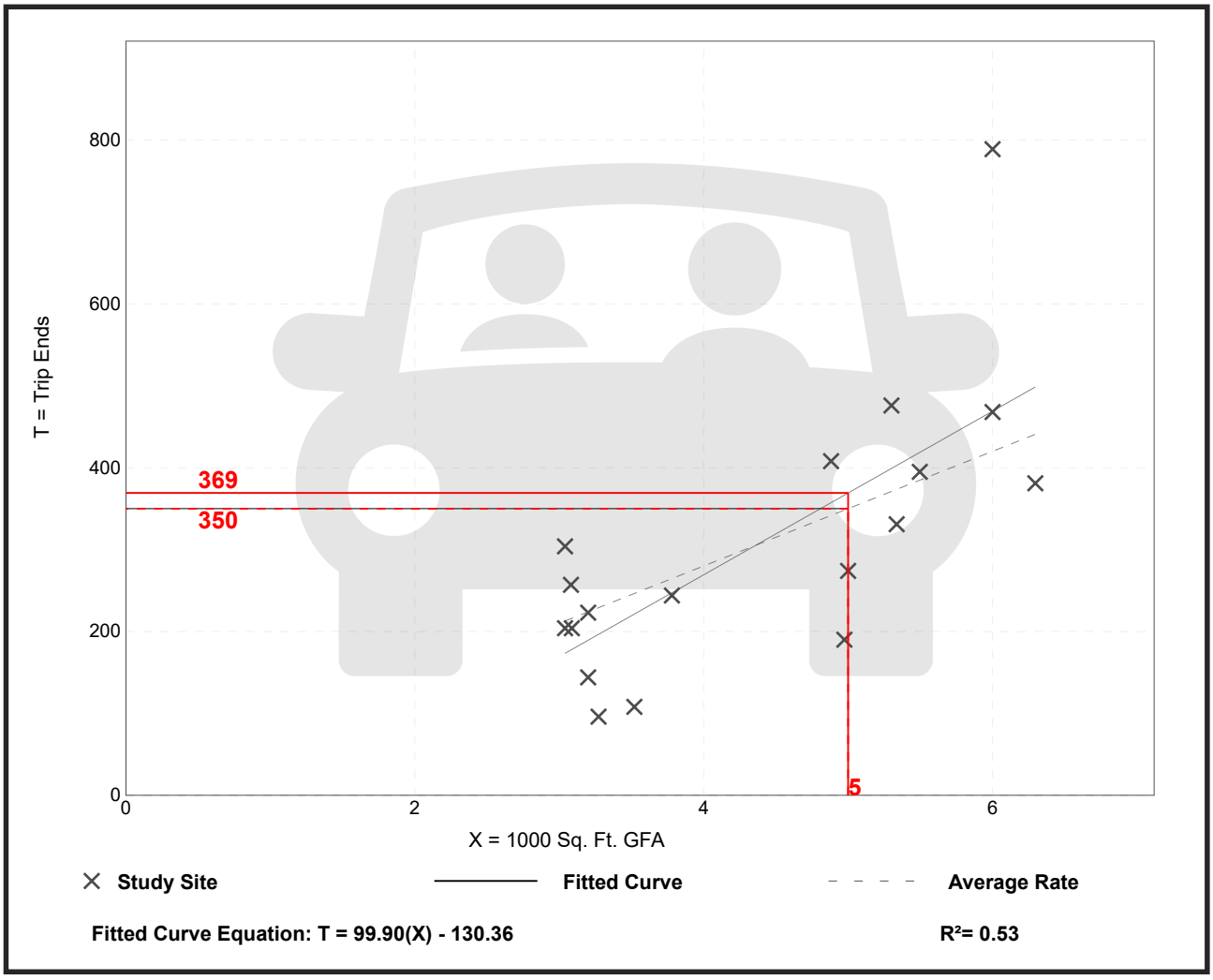
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 18
Avg. 1000 Sq. Ft. GFA: 4
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
70.01	29.34 - 131.50	25.84

Data Plot and Equation



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Super Convenience Market/Gas Station
(960)

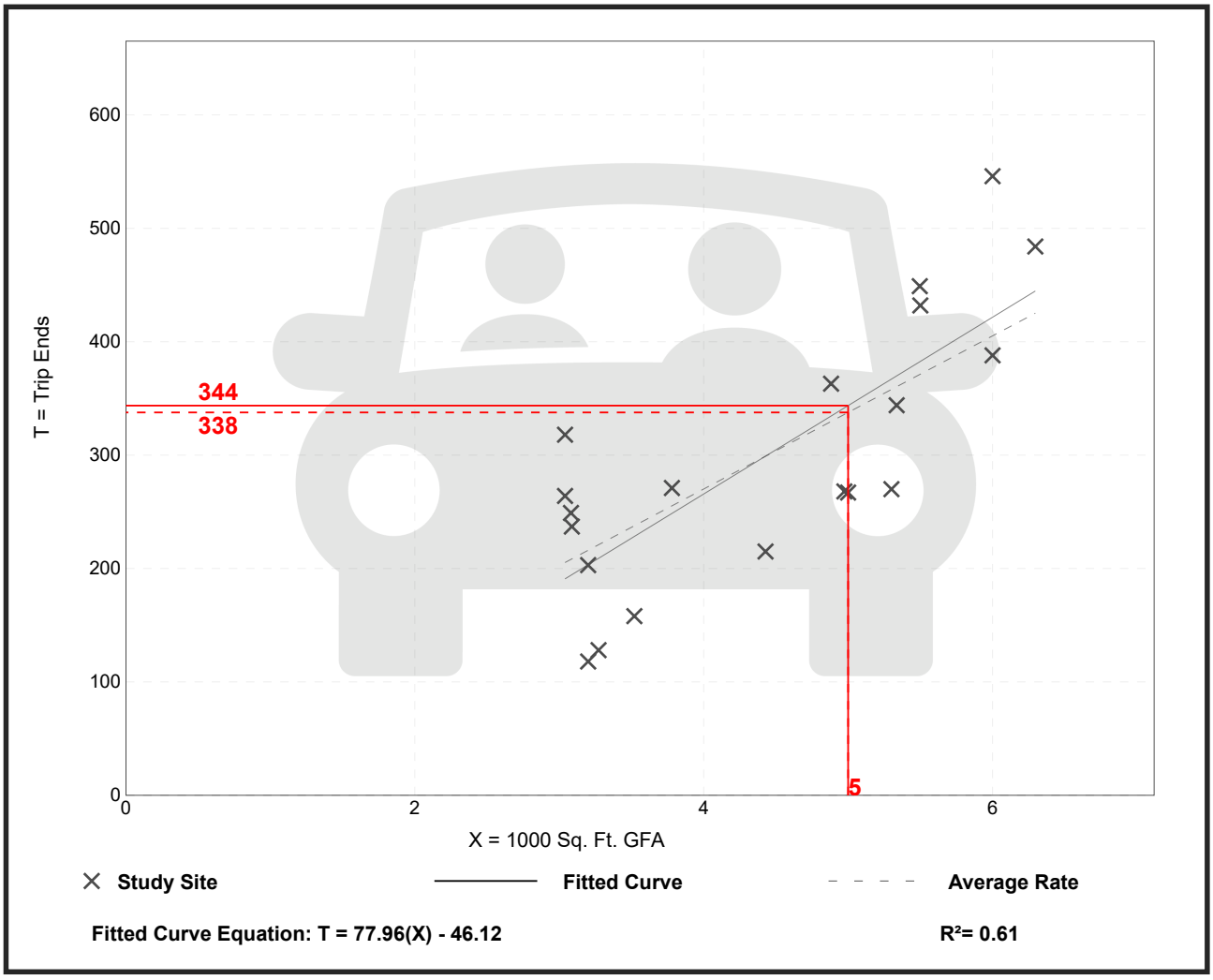
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 20
Avg. 1000 Sq. Ft. GFA: 4
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
67.53	36.88 - 104.61	17.12

Data Plot and Equation



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Super Convenience Market/Gas Station
(960)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Saturday**

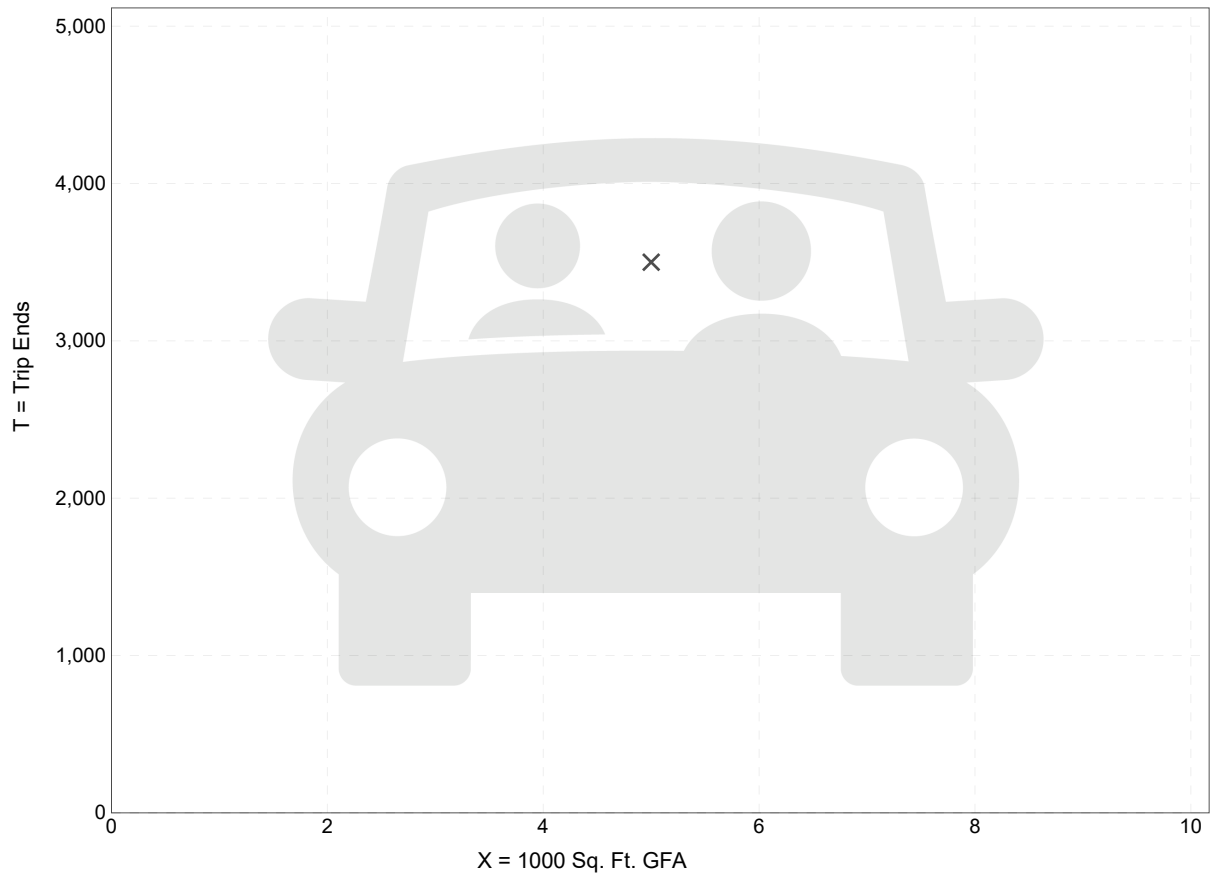
Setting/Location: **General Urban/Suburban**
Number of Studies: 1
Avg. 1000 Sq. Ft. GFA: 5
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
700.00	700.00 - 700.00	*

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= **

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Super Convenience Market/Gas Station
(960)

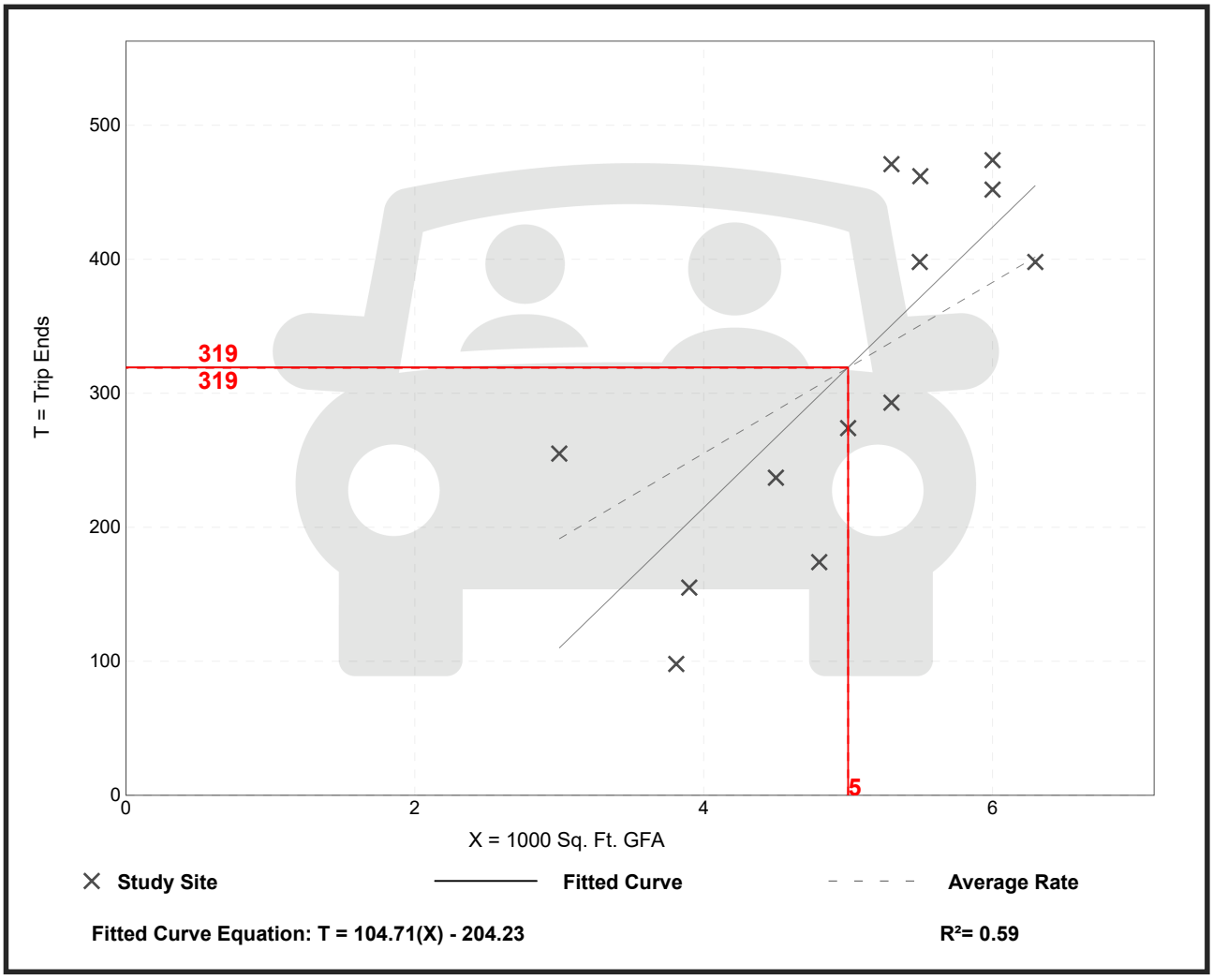
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Saturday, Peak Hour of Generator**

Setting/Location: **General Urban/Suburban**
Number of Studies: 13
Avg. 1000 Sq. Ft. GFA: 5
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
63.80	25.72 - 88.87	19.29

Data Plot and Equation



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Super Convenience Market/Gas Station
(960)

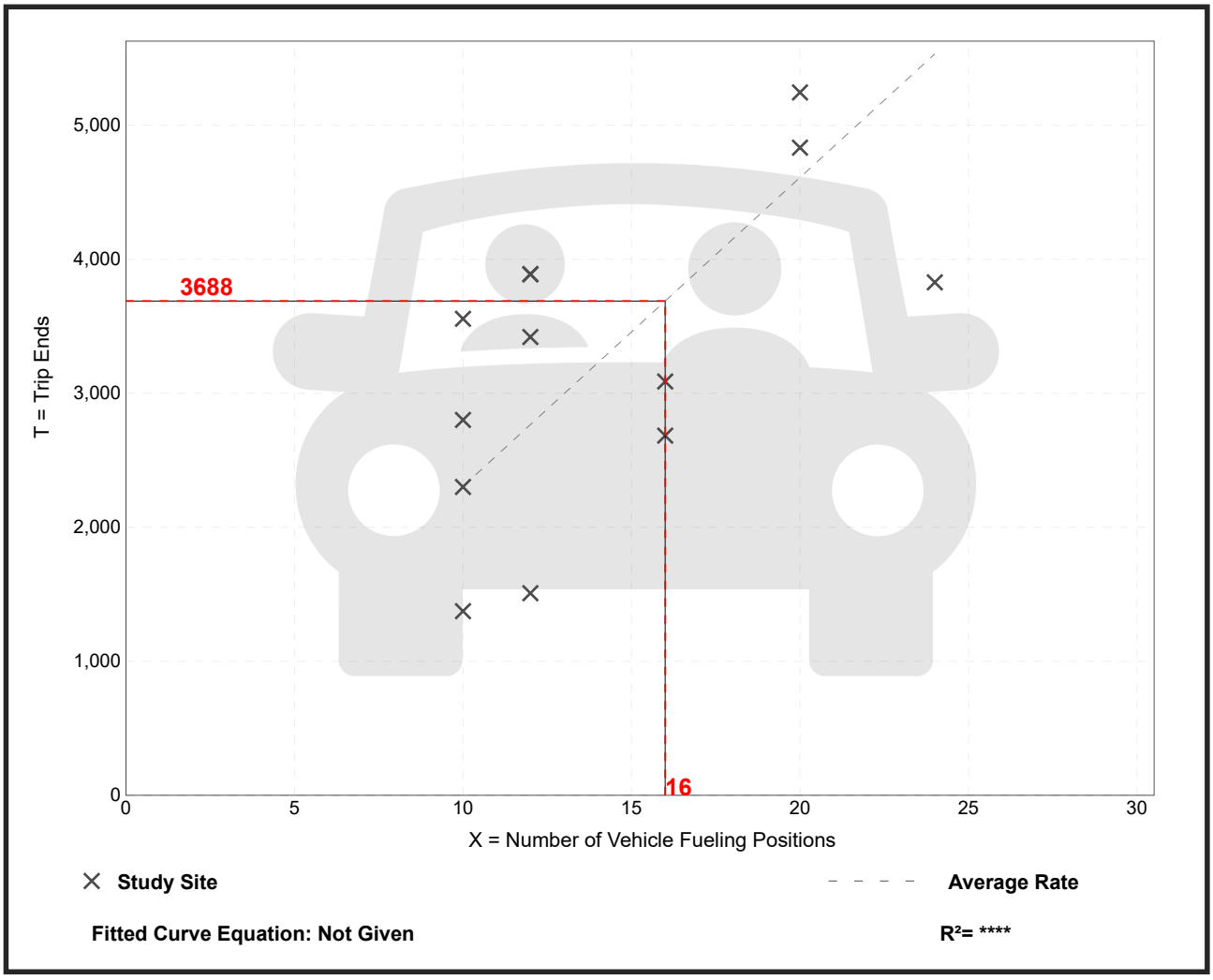
Vehicle Trip Ends vs: Vehicle Fueling Positions
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 13
Avg. Num. of Vehicle Fueling Positions: 14
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
230.52	125.67 - 355.60	71.75

Data Plot and Equation



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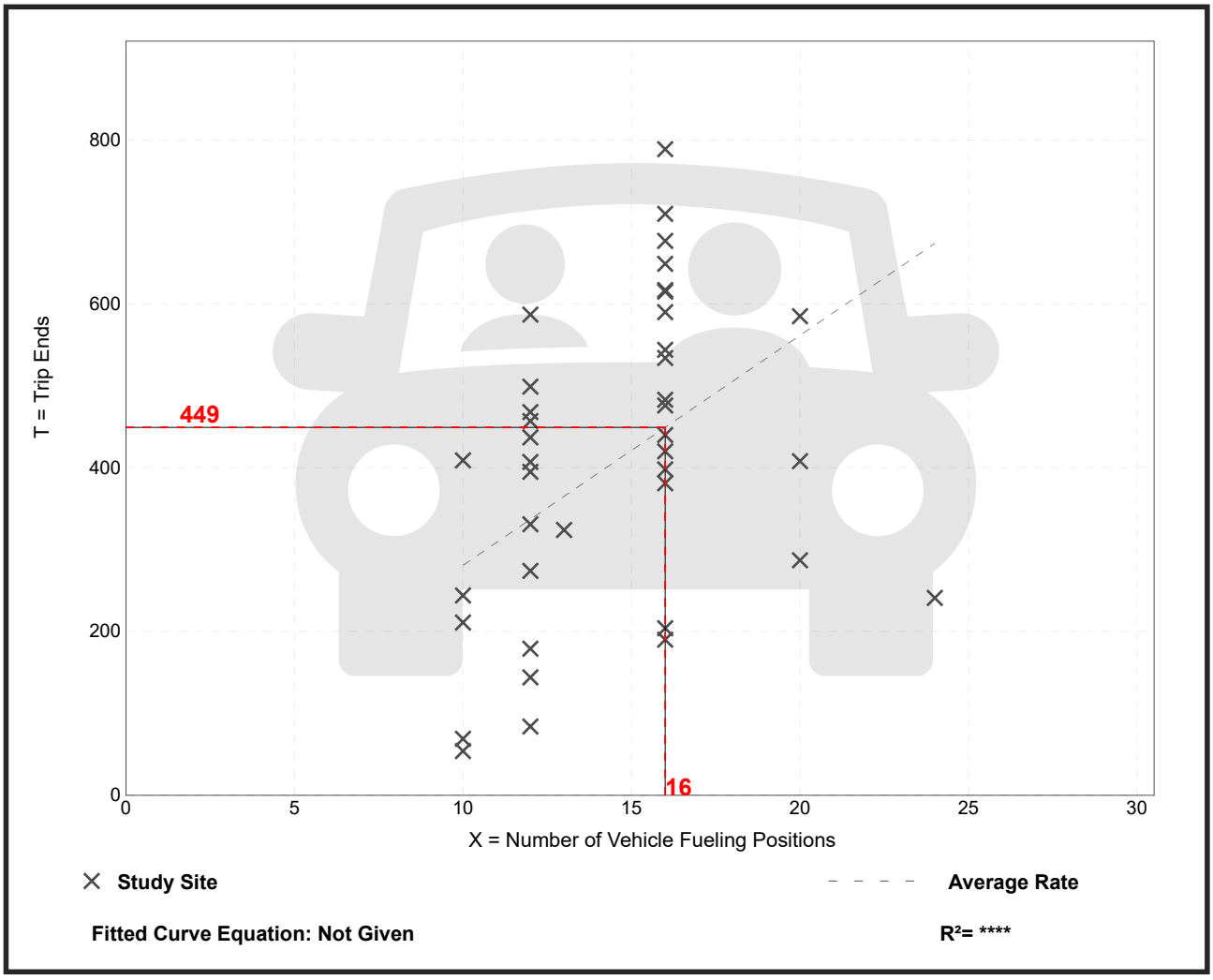
Super Convenience Market/Gas Station
(960)

Vehicle Trip Ends vs: **Vehicle Fueling Positions**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 39
Avg. Num. of Vehicle Fueling Positions: 14
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
28.08	5.40 - 49.31	11.98

Data Plot and Equation



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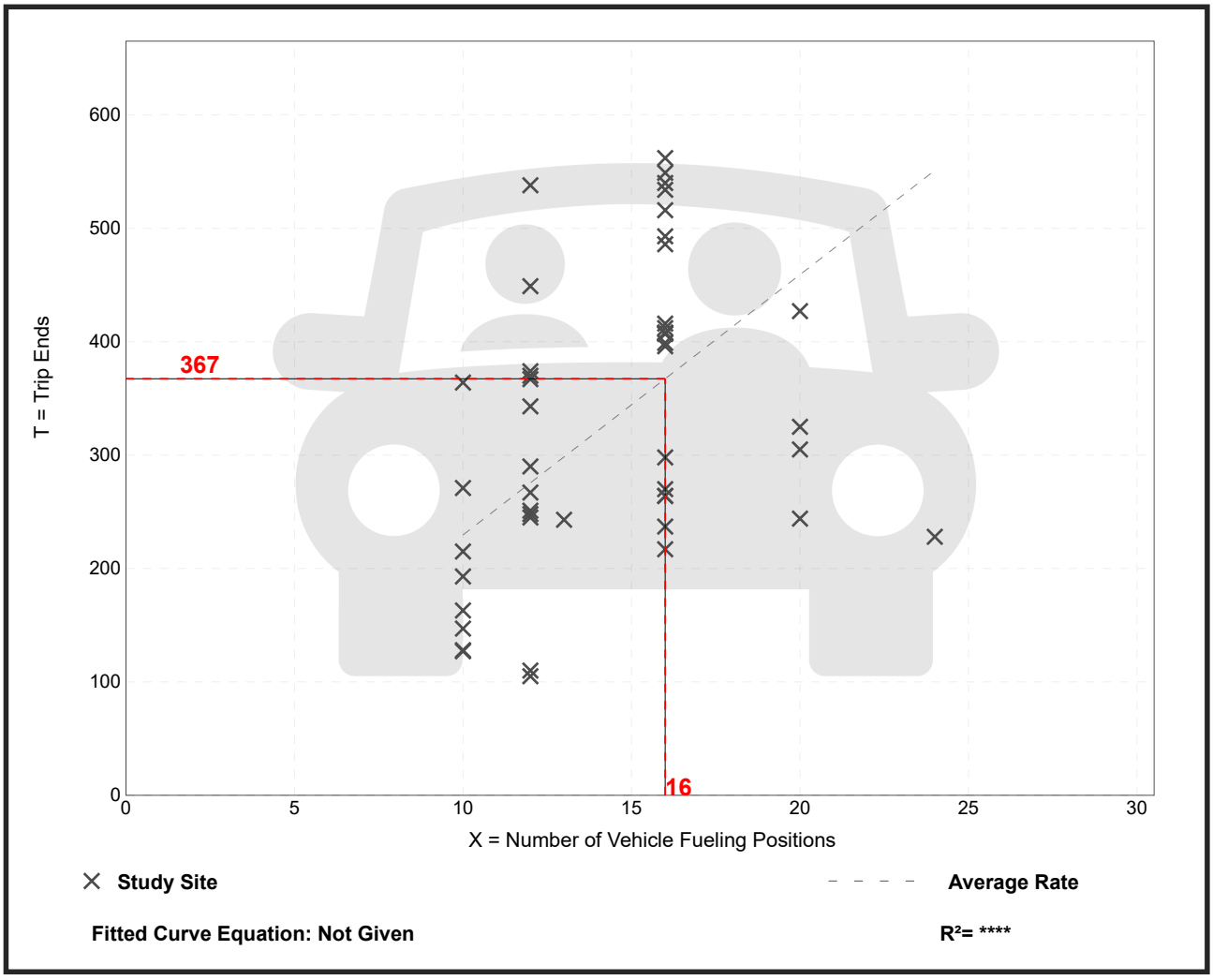
Super Convenience Market/Gas Station
(960)

Vehicle Trip Ends vs: **Vehicle Fueling Positions**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 48
Avg. Num. of Vehicle Fueling Positions: 14
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
22.96	8.75 - 44.83	8.34

Data Plot and Equation



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Super Convenience Market/Gas Station
(960)

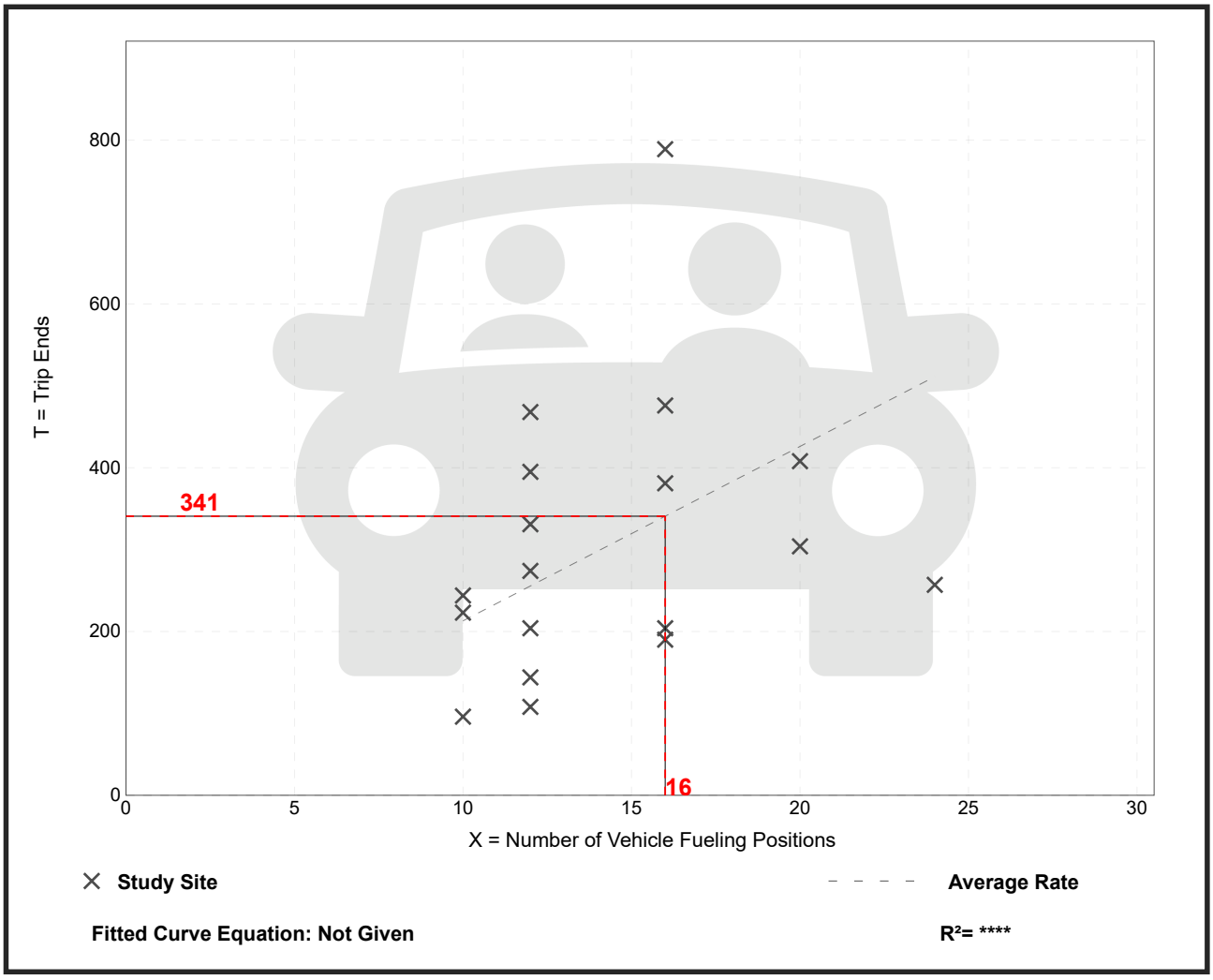
Vehicle Trip Ends vs: **Vehicle Fueling Positions**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 18
Avg. Num. of Vehicle Fueling Positions: 14
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
21.30	9.00 - 49.31	11.15

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= **

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Super Convenience Market/Gas Station
(960)

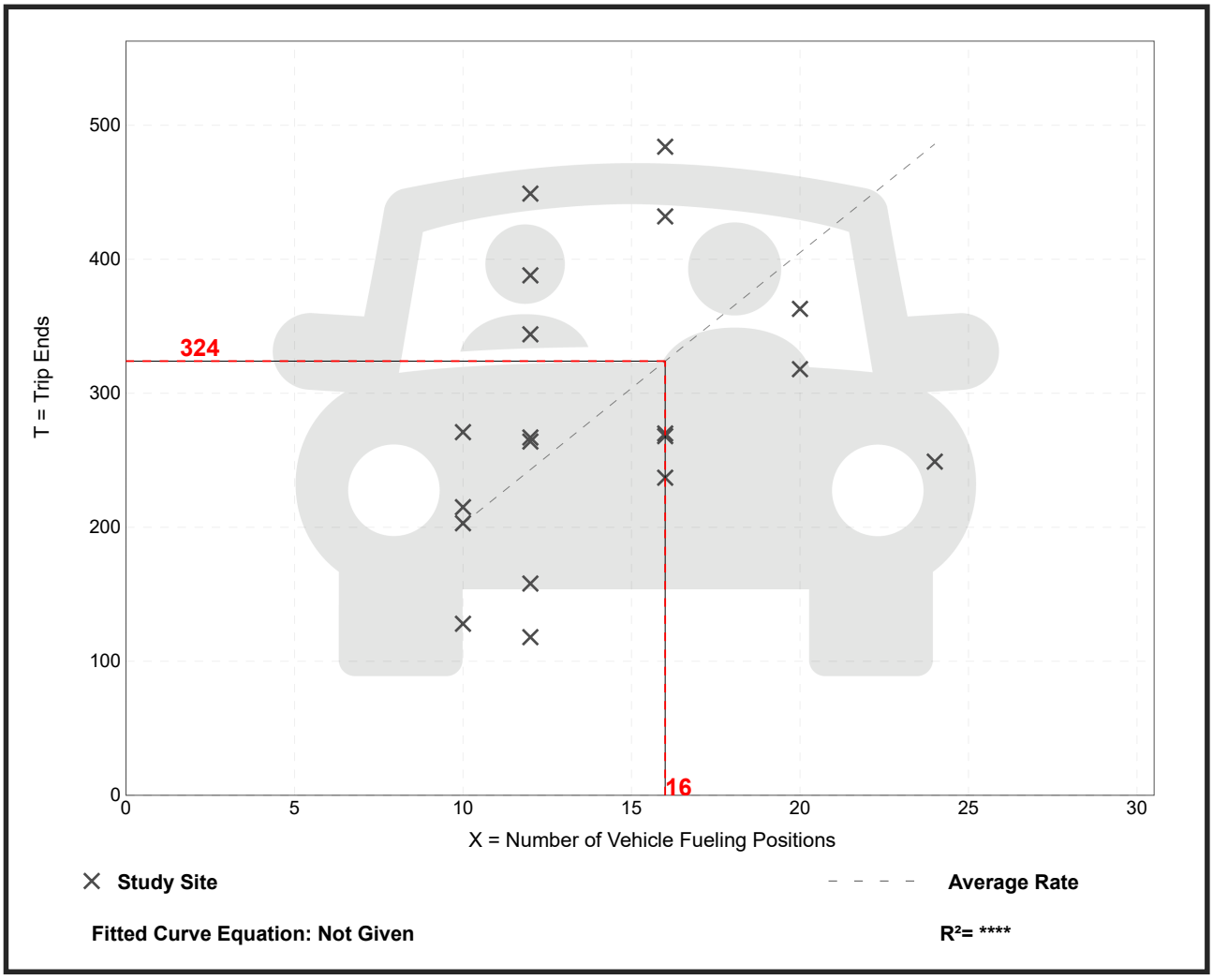
Vehicle Trip Ends vs: **Vehicle Fueling Positions**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 19
Avg. Num. of Vehicle Fueling Positions: 14
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
20.25	9.83 - 37.42	7.73

Data Plot and Equation



Trip Gen Manual, 10th Edition ● Institute of Transportation Engineers

Super Convenience Market/Gas Station
(960)

Vehicle Trip Ends vs: Vehicle Fueling Positions
On a: Saturday

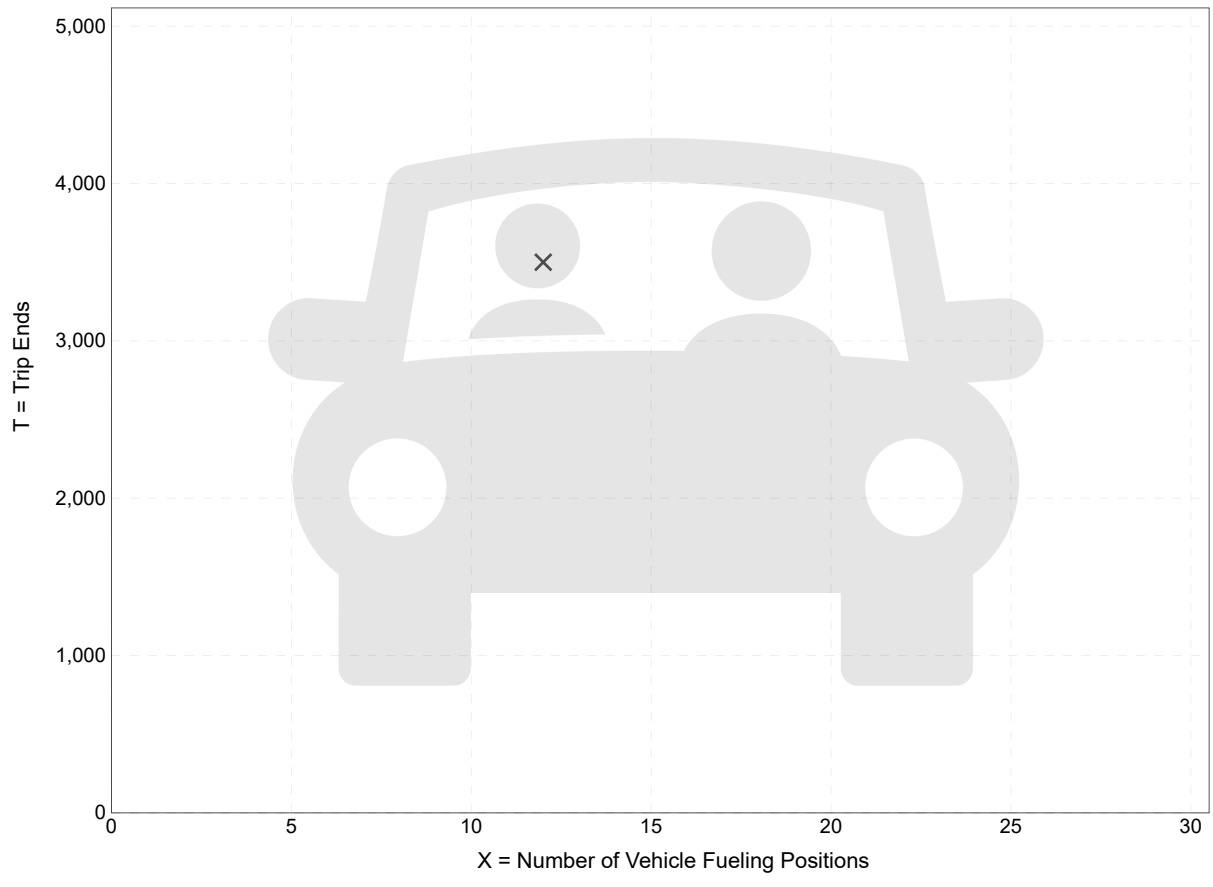
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Vehicle Fueling Positions: 12
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
291.67	291.67 - 291.67	*

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= **

Trip Gen Manual, 10th Edition ● Institute of Transportation Engineers

Super Convenience Market/Gas Station
(960)

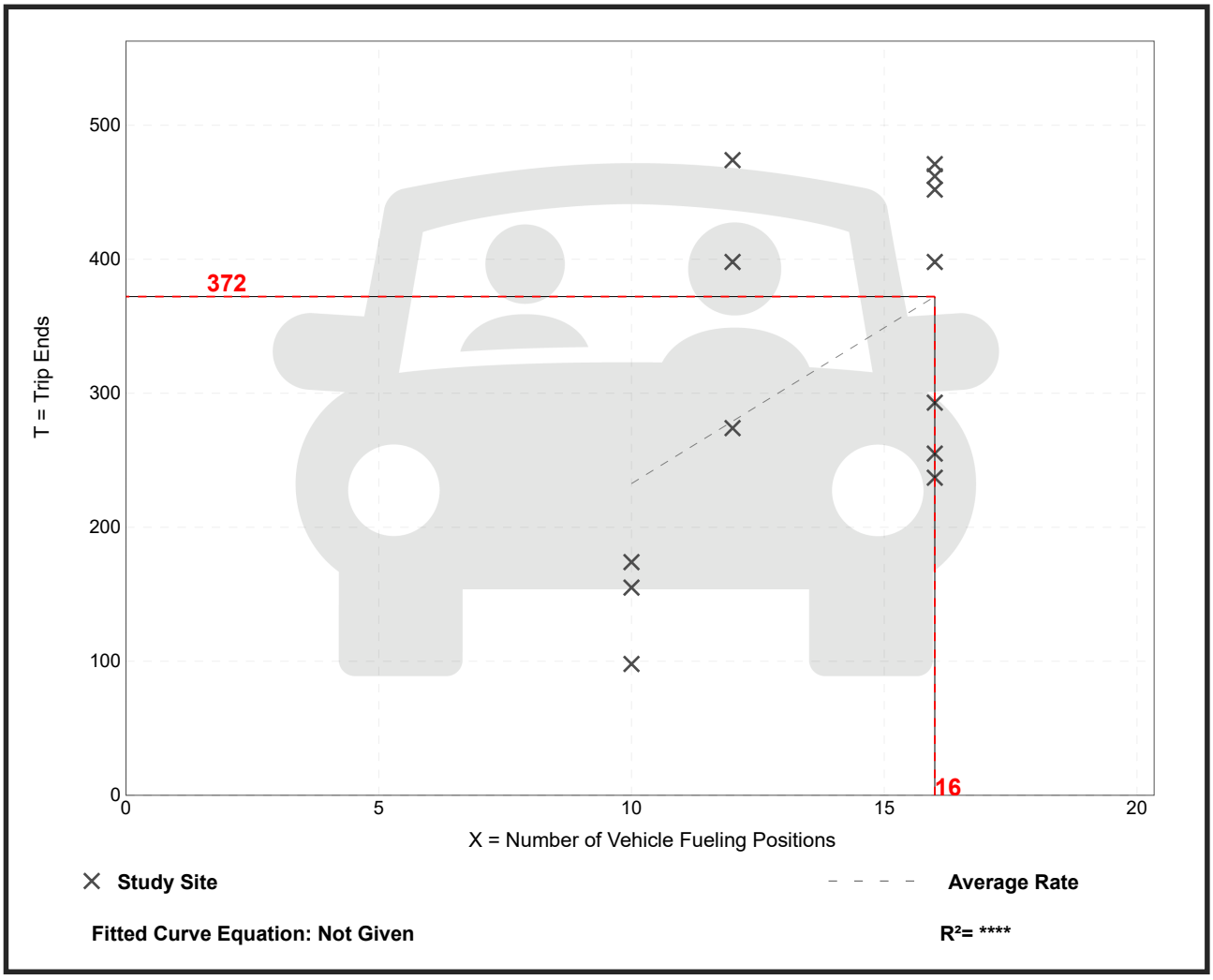
Vehicle Trip Ends vs: **Vehicle Fueling Positions**
On a: **Saturday, Peak Hour of Generator**

Setting/Location: **General Urban/Suburban**
Number of Studies: 13
Avg. Num. of Vehicle Fueling Positions: 14
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
23.26	9.80 - 39.50	8.20

Data Plot and Equation



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Growth Rate & Volume Worksheets

Growth Factors for August 2019 to July 2020				
County	**Urban Interstate**	**Rural Interstate**	**Urban Non-Interstate**	**Rural Non-Interstate**
ADAMS	*	*	0.93	0.73
ALLEGHENY	0.81	*	0.00	0.37
ARMSTRONG	0.79	*	0.00	0.36
BEAVER	0.73	1.93	0.00	0.33
BEDFORD	*	2.10	0.00	0.42
BERKS	1.10	2.41	0.20	0.57
BLAIR	0.75	1.91	0.00	0.36
BRADFORD	1.08	*	0.01	0.49
BUCKS	1.31	2.31	0.54	0.59
BUTLER	1.75	2.74	0.65	0.75
CAMBRIA	0.34	*	0.00	0.18
CAMERON	*	*	*	0.14
CARBON	1.30	2.58	0.33	0.62
CENTRE	1.49	2.53	0.65	0.68
CHESTER	1.70	2.99	0.52	0.80
CLARION	0.90	2.00	0.00	0.40
CLEARFIELD	0.93	2.06	0.00	0.42
CLINTON	0.88	2.21	0.00	0.45
COLUMBIA	1.14	2.25	0.30	0.54
CRAWFORD	0.89	1.96	0.03	0.42
CUMBERLAND	1.53	2.55	0.74	0.69
DAUPHIN	1.31	*	0.41	0.63
DELAWARE	0.93	*	0.00	*
ELK	*	*	0.00	0.29
ERIE	0.95	2.14	0.00	0.43
FAYETTE	0.77	*	0.00	0.38
FOREST	*	*	*	0.65
FRANKLIN	1.31	2.54	0.47	0.65
FULTON	*	2.10	*	0.50
GREENE	1.19	2.62	0.00	0.56
HUNTINGDON	*	1.91	0.00	0.37
INDIANA	1.17	*	0.11	0.52
JEFFERSON	*	2.11	0.00	0.42
JUNIATA	*	*	*	0.55
LACKAWANNA	0.78	2.27	0.00	0.42
LANCASTER	1.74	2.64	1.08	0.78
LAWRENCE	0.74	2.05	0.00	0.35
LEBANON	*	2.44	0.39	0.61
LEHIGH	1.54	2.86	0.43	0.73
LUZERNE	0.71	2.14	0.00	0.39
LYCOMING	0.96	2.16	0.00	0.45
MCKEAN	0.60	*	0.00	0.33
MERCER	0.63	1.96	0.00	0.33
MIFFLIN	0.73	*	0.00	0.37
MONROE	1.40	2.46	0.68	0.67
MONTGOMERY	1.17	*	0.28	0.57
MONTOUR	1.48	2.61	0.28	0.65
NORTHAMPTON	1.28	2.53	0.41	0.63
NORTHUMBERLAND	0.75	2.04	0.00	0.39
PERRY	*	*	0.92	0.63
PHILADELPHIA	0.69	*	0.00	*
PIKE	2.14	2.79	1.59	0.96
POTTER	*	*	*	0.46
SCHUYLKILL	0.58	1.89	0.00	0.33
SNYDER	1.15	*	0.35	0.55
SOMERSET	0.59	1.72	0.00	0.32
SULLIVAN	*	*	*	0.42
SUSQUEHANNA	1.11	2.23	0.27	0.53
TIOGA	*	*	*	0.48
UNION	1.52	2.42	0.82	0.69
VENANGO	*	1.67	0.00	0.28
WARREN	*	*	0.00	0.36
WASHINGTON	1.28	2.62	0.10	0.59
WAYNE	*	2.22	0.16	0.51
WESTMORELAND	0.89	2.05	0.00	0.40
WYOMING	*	*	0.00	0.43
YORK	1.34	2.53	0.54	0.66

* = Functional Class Doesn't Exist in County

Questions? Please contact Andrew O'Neill at the Bureau of Planning and Research, 717-346-3250 or andoneill@pa.gov

NOTE: The projected growth factors are derived using historical VMT (Vehicle Miles Traveled) data (1994 to 2018), as well as Woods and Poole demographic and economic data. The factors should be compounded when calculating future values. The factors should not be used to project traffic beyond a 20-year period. Please be aware that these factors are estimates, and unforeseen events (opening of shopping centers, fast food franchises, gas stations, etc) could cause growth to change over time.

pennsylvania
DEPARTMENT OF TRANSPORTATION

Future Volume Work Sheet:

151-237 Gettysburg Pike 319590 1

Upper Allen Township, Cumberland Co., PA

No Build Scenarios
Generation Input
Generation Output

Study Year: 2020
Growth Rate: 0.74
Time Period: Weekday AM Peak Hour of the Street
Intersection: South Market Street - Gettysburg Pike

		South Market Street EB			South Market Street WB			Gettysburg Pike NB			Gettysburg Pike SB		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year	2020	36	264	50	151	516	73	103	74	236	37	37	51
Opening Year	2022	37	268	51	153	524	74	105	75	240	38	38	52
Design Horizon Year	2027	38	278	53	159	543	77	108	78	248	39	39	54
Development Generation 221				1	3			3	1	6		0	
Development Generation 820				3	12			4	1	6		1	
Development Generation 934S				7	27			13	4	23		2	
Pass By			-12	12	17	-17		17		12			
Development Generation 934N		5							6		16	3	9
Pass By		10	-10			-14					10		14
Development Generation 960		9							10		27	6	17
Pass By		56	-56			-80					56		80
Total Development Adjust		80	-78	23	59	-111	0	37	22	47	109	12	120
With Development	2022	117	190	74	212	413	74	142	97	287	147	50	172
With Development	2027	118	200	76	218	432	77	145	100	295	148	51	174
Adjacent Development		1	6	1		31		7					3
Without Development	2022	38	274	52	153	555	74	112	75	240	38	38	55
Without Development	2027	39	284	54	159	574	77	115	78	248	39	39	57
With Dev & ADJ Dev	2022	118	196	75	212	444	74	149	97	287	147	50	175
With Dev & ADJ Dev	2027	119	206	77	218	463	77	152	100	295	148	51	177

Study Year: 2020
Growth Rate: 0.74
Time Period: Weekday PM Peak Hour of the Street
Intersection: South Market Street - Gettysburg Pike

		South Market Street EB			South Market Street WB			Gettysburg Pike NB			Gettysburg Pike SB		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year	2020	46	422	63	195	303	127	55	65	169	121	117	35
Opening Year	2022	47	428	64	198	308	129	56	66	172	123	119	36
Design Horizon Year	2027	48	444	66	205	319	134	58	68	178	127	123	37
Development Generation 221				1	3			1	0	2		1	
Development Generation 820				5	14			5	3	19		3	
Pass By			-4	4	4	-4		5	1	6			
Development Generation 934S				6	14			3	2	12		3	
Pass By			-10	10	9	-9		6	-1	7			
Development Generation 934N		6							3		14	3	4
Pass By		10	-10			-8					9	-1	8
Development Generation 960		10							5		26	7	7
Pass By		53	-53			-47					53		47
Total Development Adjust		79	-77	26	44	-68	0	20	13	46	102	16	66
With Development	2022	126	351	90	242	240	129	76	79	218	225	135	102
With Development	2027	127	367	92	249	251	134	78	81	224	229	139	103
Adjacent Development		3	32	7		10		2					1
Without Development	2022	50	460	71	198	318	129	58	66	172	123	119	37
Without Development	2027	51	476	73	205	329	134	60	68	178	127	123	38
With Dev & ADJ Dev	2022	129	383	97	242	250	129	78	79	218	225	135	103
With Dev & ADJ Dev	2027	130	399	99	249	261	134	80	81	224	229	139	104

Study Year: 2020
Growth Rate: 0.74
Time Period: Saturday Peak Hour of the Street
Intersection: South Market Street - Gettysburg Pike

		South Market Street EB			South Market Street WB			Gettysburg Pike NB			Gettysburg Pike SB		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year	2020	28	296	46	80	330	118	56	61	117	114	83	34
Opening Year	2022	28	300	47	81	335	120	57	62	119	116	84	35
Design Horizon Year	2027	29	312	48	84	347	124	59	64	123	120	87	36
Development Generation 221				2	5			1	1	4		1	
Development Generation 820				9	27			11	5	25		6	
Pass By			-6	6	6	-6		6		6			
Development Generation 934 S				21	58			22	11	51		13	
Development Generation 934 N		17							10		43	10	19
Development Generation 960		12							8		34	8	14
Pass By		43	-43			-44					43		44
Total Development Adjust		72	-49	38	96	-50	0	40	35	86	120	38	77
With Development	2022	100	251	85	177	285	120	97	97	205	236	122	112
With Development	2027	101	263	86	180	297	124	99	99	209	240	125	113

Future Volume Work Sheet:

151-237 Gettysburg Pike 319590 2

Upper Allen Township, Cumberland Co., PA

Study Year: 2020
Growth Rate: 0.74
Time Period: Weekday AM Peak Hour of the Street
Intersection: South Market Street - US 15 Southbound Ramp

	South Market Street EB			South Market Street WB			US 15 Southbound Ramp NB			US 15 Southbound Ramp SB		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year 2020		449	91	46	588					163	0	149
Opening Year 2022		456	92	47	597					165	0	151
Design Horizon Year 2027		473	96	48	619					172	0	157
Development Generation 221		4	2		2							1
Development Generation 820		4	2		7							5
Development Generation 934S		14	9		16							11
Development Generation 934N		10	6		12							6
Development Generation 960		16	11		19							13
Total Development Adjust		48	30	0	56					0	0	36
With Development 2022		504	122	47	653					165	0	187
With Development 2027		521	126	48	675					172	0	193
Adjacent Development		5	1		24							7
Without Development 2022		461	93	47	621					165	0	158
Without Development 2027		478	97	48	643					172	0	164
With Dev & ADJ Dev 2022		509	123	47	677					165	0	194
With Dev & ADJ Dev 2027		526	127	48	699					172	0	200

Study Year: 2020
Growth Rate: 0.74
Time Period: Weekday PM Peak Hour of the Street
Intersection: South Market Street - US 15 Southbound Ramp

	South Market Street EB			South Market Street WB			US 15 Southbound Ramp NB			US 15 Southbound Ramp SB		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year 2020		575	143	80	419					380	0	193
Opening Year 2022		584	145	81	425					386	0	196
Design Horizon Year 2027		605	151	84	441					400	0	203
Development Generation 221		1	1		2							1
Development Generation 820		12	7		9							5
Development Generation 934S		7	5		9							5
Development Generation 934N		8	6		9							5
Development Generation 960		16	10		15							9
Total Development Adjust		44	29	0	44					0	0	25
With Development 2022		628	174	81	469					386	0	221
With Development 2027		649	180	84	485					400	0	228
Adjacent Development		28	4		6							4
Without Development 2022		612	149	81	431					386	0	200
Without Development 2027		633	155	84	447					400	0	207
With Dev & ADJ Dev 2022		656	178	81	475					386	0	225
With Dev & ADJ Dev 2027		677	184	84	491					400	0	232

Study Year: 2020
Growth Rate: 0.74
Time Period: Saturday Peak Hour of the Street
Intersection: South Market Street - US 15 Southbound Ramp

	South Market Street EB			South Market Street WB			US 15 Southbound Ramp NB			US 15 Southbound Ramp SB		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year 2020		454	46	66	480					174	2	70
Opening Year 2022		461	47	67	487					177	2	71
Design Horizon Year 2027		478	48	69	505					183	2	74
Development Generation 221		2	2		3							2
Development Generation 820		15	10		16							11
Development Generation 934 S		31	20		36							22
Development Generation 934 N		26	17		29							18
Development Generation 960		21	13		21							14
Total Development Adjust		95	62	0	105					0	0	67
With Development 2022		556	109	67	592					177	2	138
With Development 2027		573	110	69	610					183	2	141

Future Volume Work Sheet:

151-237 Gettysburg Pike 319590 3

Upper Allen Township, Cumberland Co., PA

Study Year: 2020
Growth Rate: 0.74
Time Period: Weekday AM Peak Hour of the Street
Intersection: South Market Street - US 15 Northbound Ramp

		South Market Street EB			South Market Street WB			US 15 Northbound Ramp NB			US 15 Northbound Ramp SB		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year	2020	431	184			450	267	156	1	108			
Opening Year	2022	437	187			457	271	158	1	110			
Design Horizon Year	2027	454	194			474	281	164	1	114			
Development Generation 221		1	3			1		1					
Development Generation 820		2	2			2		5					
Development Generation 934 S		9	5			5		11					
Development Generation 934 N		7	3			4		8					
Development Generation 960		11	5			6		13					
Total Development Adjust		30	18			18	0	38	0	0			
With Development	2022	467	205			475	271	196	1	110			
With Development	2027	484	212			492	281	202	1	114			
Adjacent Development		4	1			17		7					
Without Development	2022	441	188			474	271	165	1	110			
Without Development	2027	458	195			491	281	171	1	114			
With Dev & ADJ Dev	2022	471	206			492	271	203	1	110			
With Dev & ADJ Dev	2027	488	213			509	281	209	1	114			

Study Year: 2020
Growth Rate: 0.74
Time Period: Weekday PM Peak Hour of the Street
Intersection: South Market Street - US 15 Northbound Ramp

		South Market Street EB			South Market Street WB			US 15 Northbound Ramp NB			US 15 Northbound Ramp SB		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year	2020	542	419			333	159	174	0	91			
Opening Year	2022	550	425			338	161	177	0	92			
Design Horizon Year	2027	571	441			351	167	183	0	96			
Development Generation 221		1	0			1		1					
Development Generation 820		8	4			3		6					
Development Generation 934 S		5	2			3		6					
Development Generation 934 N		7	1			3		6					
Development Generation 960		11	5			5		10					
Total Development Adjust		32	12			15	0	29	0	0			
With Development	2022	582	437			353	161	206	0	92			
With Development	2027	603	453			366	167	212	0	96			
Adjacent Development		16	12			4		2					
Without Development	2022	566	437			342	161	179	0	92			
Without Development	2027	587	453			355	167	185	0	96			
With Dev & ADJ Dev	2022	598	449			357	161	208	0	92			
With Dev & ADJ Dev	2027	619	465			370	167	214	0	96			

Study Year: 2020
Growth Rate: 0.74
Time Period: Saturday Peak Hour of the Street
Intersection: South Market Street - US 15 Northbound Ramp

		South Market Street EB			South Market Street WB			US 15 Northbound Ramp NB			US 15 Northbound Ramp SB		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year	2020	124	506			407	208	137	1	42			
Opening Year	2022	126	514			413	211	139	1	43			
Design Horizon Year	2027	131	533			429	219	144	1	44			
Development Generation 221		1	1			1		2					
Development Generation 820		10	5			5		11					
Development Generation 934 S		21	10			12		24					
Development Generation 934 N		18	8			9		20					
Development Generation 960		14	7			7		14					
Total Development Adjust		64	31			34	0	71	0	0			
With Development	2022	190	545			447	211	210	1	43			
With Development	2027	195	564			463	219	215	1	44			

Future Volume Work Sheet:

151-237 Gettysburg Pike 319590 4

Upper Allen Township, Cumberland Co., PA

Study Year: 2020
Growth Rate: 0.74
Time Period: Weekday AM Peak Hour of the Street
Intersection: Site Driveway 1 - Gettysburg Pike

		EB			Site Driveway 1 WB			Gettysburg Pike NB			Gettysburg Pike SB		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year	2020								183			125	
Opening Year	2022	0	0	0	0	0	0	0	186	0	0	127	0
Design Horizon Year	2027	0	0	0	0	0	0	0	193	0	0	132	0
Development Generation 221									1			0	
Development Generation 820									1			1	
Development Generation 934S									4			2	
Development Generation 934N					28		3			11	2		
Pass By					26		3		-4	14	2	-2	
Development Generation 960					50		4			19	3		
Pass By					150		21		-20	76	14	-14	
Total Development Adjust		0	0	0	254	0	31	0	-18	120	21	-13	0
With Development	2022	0	0	0	254	0	31	0	168	120	21	114	0
With Development	2027	0	0	0	254	0	31	0	175	120	21	119	0
Adjacent Development									1			2	
Without Development	2022	0	0	0	0	0	0	0	187	0	0	129	0
Without Development	2027	0	0	0	0	0	0	0	194	0	0	134	0
With Dev & ADJ Dev	2022	0	0	0	254	0	31	0	169	120	21	116	0
With Dev & ADJ Dev	2027	0	0	0	254	0	31	0	176	120	21	121	0

Study Year: 2020
Growth Rate: 0.74
Time Period: Weekday PM Peak Hour of the Street
Intersection: Site Driveway 1 - Gettysburg Pike

		EB			Site Driveway 1 WB			Gettysburg Pike NB			Gettysburg Pike SB		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year	2020								238			273	
Opening Year	2022	0	0	0	0	0	0	0	242	0	0	277	0
Design Horizon Year	2027	0	0	0	0	0	0	0	251	0	0	287	0
Development Generation 221									0			1	
Development Generation 820									3			3	
Development Generation 934S									2			3	
Development Generation 934N					21		3			9	3		
Pass By					20		3		-3	13	4	-4	
Development Generation 960					40		4			15	5		
Pass By					121		19		-18	71	21	-21	
Total Development Adjust		0	0	0	202	0	29	0	-16	108	33	-18	0
With Development	2022	0	0	0	202	0	29	0	226	108	33	259	0
With Development	2027	0	0	0	202	0	29	0	235	108	33	269	0
Adjacent Development									3			1	
Without Development	2022	0	0	0	0	0	0	0	245	0	0	278	0
Without Development	2027	0	0	0	0	0	0	0	254	0	0	288	0
With Dev & ADJ Dev	2022	0	0	0	202	0	29	0	229	108	33	260	0
With Dev & ADJ Dev	2027	0	0	0	202	0	29	0	238	108	33	270	0

Study Year: 2020
Growth Rate: 0.74
Time Period: Saturday Peak Hour of the Street
Intersection: Site Driveway 1 - Gettysburg Pike

		EB			Site Driveway 1 WB			Gettysburg Pike NB			Gettysburg Pike SB		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year	2020								207			231	
Opening Year	2022	0	0	0	0	0	0	0	210	0	0	234	0
Design Horizon Year	2027	0	0	0	0	0	0	0	218	0	0	243	0
Development Generation 221									1			1	
Development Generation 820									5			6	
Development Generation 934S									11			13	
Development Generation 934 N					72		9			27	10		
Development Generation 960					56		7			20	8		
Pass By					106		17		-17	60	19	-19	
Total Development Adjust		0	0	0	234	0	33	0	0	107	37	1	0
With Development	2022	0	0	0	234	0	33	0	210	107	37	235	0
With Development	2027	0	0	0	234	0	33	0	218	107	37	244	0

Future Volume Work Sheet:

151-237 Gettysburg Pike 319590 5

Upper Allen Township, Cumberland Co., PA

Study Year: 2020
Growth Rate: 0.74
Time Period: Weekday AM Peak Hour of the Street
Intersection: South Market Street - Site Driveway 2

		South Market Street EB			South Market Street WB			NB			Site Driveway 2 SB		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year	2020					740							
Opening Year	2022	0	0	0	0	751		0	0	0	0	0	0
Design Horizon Year	2027	0	0	0	0	779		0	0	0	0	0	0
Development Generation 221						3							
Development Generation 820						12							
Development Generation 934S						27							
Development Generation 934N							18						
Pass By						-14	14						
Development Generation 960							32						
Pass By						-80	80						
Total Development Adjust		0	0	0	0	-52	144	0	0	0	0	0	0
With Development	2022	0	0	0	0	699	144	0	0	0	0	0	0
With Development	2027	0	0	0	0	727	144	0	0	0	0	0	0
Adjacent Development						31							
Without Development	2022	0	0	0	0	782	0	0	0	0	0	0	0
Without Development	2027	0	0	0	0	810	0	0	0	0	0	0	0
With Dev & ADJ Dev	2022	0	0	0	0	730	144	0	0	0	0	0	0
With Dev & ADJ Dev	2027	0	0	0	0	758	144	0	0	0	0	0	0

Study Year: 2020
Growth Rate: 0.74
Time Period: Weekday PM Peak Hour of the Street
Intersection: South Market Street - Site Driveway 2

		South Market Street EB			South Market Street WB			NB			Site Driveway 2 SB		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year	2020					625							
Opening Year	2022	0	0	0	0	634	0	0	0	0	0	0	0
Design Horizon Year	2027	0	0	0	0	658	0	0	0	0	0	0	0
Development Generation 221						3							
Development Generation 820						14							
Development Generation 934S						14							
Development Generation 934N							14						
Pass By						-8	8						
Development Generation 960							24						
Pass By						-47	47						
Total Development Adjust		0	0	0	0	-24	93	0	0	0	0	0	0
With Development	2022	0	0	0	0	610	93	0	0	0	0	0	0
With Development	2027	0	0	0	0	634	93	0	0	0	0	0	0
Adjacent Development						10							
Without Development	2022	0	0	0	0	644	0	0	0	0	0	0	0
Without Development	2027	0	0	0	0	668	0	0	0	0	0	0	0
With Dev & ADJ Dev	2022	0	0	0	0	620	93	0	0	0	0	0	0
With Dev & ADJ Dev	2027	0	0	0	0	644	93	0	0	0	0	0	0

Study Year: 2020
Growth Rate: 0.74
Time Period: Saturday Peak Hour of the Street
Intersection: South Market Street - Site Driveway 2

		South Market Street EB			South Market Street WB			NB			Site Driveway 2 SB		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year	2020					528							
Opening Year	2022	0	0	0	0	536	0	0	0	0	0	0	0
Design Horizon Year	2027	0	0	0	0	556	0	0	0	0	0	0	0
Development Generation 221						5							
Development Generation 820						27							
Development Generation 934 S						58							
Development Generation 934 N							47						
Development Generation 960							35						
Pass By						-44	44						
Total Development Adjust		0	0	0	0	46	126	0	0	0	0	0	0
With Development	2022	0	0	0	0	582	126	0	0	0	0	0	0
With Development	2027	0	0	0	0	602	126	0	0	0	0	0	0

Future Volume Work Sheet:

151-237 Gettysburg Pike 319590 6

Upper Allen Township, Cumberland Co., PA

Study Year: 2020
Growth Rate: 0.74
Time Period: Weekday AM Peak Hour of the Street
Intersection: Site Driveway 3 - Gettysburg Pike

		EB			Site Driveway 3 WB			Gettysburg Pike NB			Gettysburg Pike SB		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year	2020								413			238	
Opening Year	2022	0	0	0	0	0	0	0	419	0	0	242	0
Design Horizon Year	2027	0	0	0	0	0	0	0	435	0	0	251	0
Development Generation 221					1		5		5	0	4	0	
Development Generation 820					1		6		5	0	16	0	
Development Generation 934S					5		20		20	0	36	0	
Pass By					6		19		10	0	35	-6	
Development Generation 934N									6			3	
Development Generation 960									10			6	
Total Development Adjust		0	0	0	13	0	50	0	56	0	91	3	0
With Development	2022	0	0	0	13	0	50	0	475	0	91	245	0
With Development	2027	0	0	0	13	0	50	0	491	0	91	254	0
Adjacent Development									7			2	
Without Development	2022	0	0	0	0	0	0	0	426	0	0	244	0
Without Development	2027	0	0	0	0	0	0	0	442	0	0	253	0
With Dev & ADJ Dev	2022	0	0	0	13	0	50	0	482	0	91	247	0
With Dev & ADJ Dev	2027	0	0	0	13	0	50	0	498	0	91	256	0

Study Year: 2020
Growth Rate: 0.74
Time Period: Weekday PM Peak Hour of the Street
Intersection: Site Driveway 3 - Gettysburg Pike

		EB			Site Driveway 3 WB			Gettysburg Pike NB			Gettysburg Pike SB		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year	2020								289			375	
Opening Year	2022	0	0	0	0	0	0	0	293	0	0	381	0
Design Horizon Year	2027	0	0	0	0	0	0	0	304	0	0	395	0
Development Generation 221					1		1		2	0	5	0	
Development Generation 820					5		14		13	0	22	0	
Pass By					3		7		5	0	10	-2	
Development Generation 934S					3		8		9	0	23	0	
Pass By					4		8		4	0	24	-6	
Development Generation 934N									3			3	
Development Generation 960									5			7	
Total Development Adjust		0	0	0	16	0	38	0	41	0	84	2	0
With Development	2022	0	0	0	16	0	38	0	334	0	84	383	0
With Development	2027	0	0	0	16	0	38	0	345	0	84	397	0
Adjacent Development		2	33	7		10		2	2			7	1
Without Development	2022	2	33	7	0	10	0	2	295	0	0	388	1
Without Development	2027	2	33	7	0	10	0	2	306	0	0	402	1
With Dev & ADJ Dev	2022	2	33	7	16	10	38	2	336	0	84	390	1
With Dev & ADJ Dev	2027	2	33	7	16	10	38	2	347	0	84	404	1

Study Year: 2020
Growth Rate: 0.74
Time Period: Saturday Peak Hour of the Street
Intersection: Site Driveway 3 - Gettysburg Pike

		EB			Site Driveway 3 WB			Gettysburg Pike NB			Gettysburg Pike SB		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year	2020								234			209	
Opening Year	2022	0	0	0	0	0	0	0	237	0	0	212	0
Design Horizon Year	2027	0	0	0	0	0	0	0	246	0	0	220	0
Development Generation 221					1		3		3	0	8	0	
Development Generation 820					6		20		21	0	42	0	
Pass By					2		7		4	0	14	-2	
Development Generation 934 S					12		42		42	0	92	0	
Development Generation 934 N									10			10	
Development Generation 960									8			8	
Total Development Adjust		0	0	0	21	0	72	0	88	0	156	16	0
With Development	2022	0	0	0	21	0	72	0	325	0	156	228	0
With Development	2027	0	0	0	21	0	72	0	334	0	156	236	0

Future Volume Work Sheet:

151-237 Gettysburg Pike 319590 7

Upper Allen Township, Cumberland Co., PA

Study Year: 2020
Growth Rate: 0.74
Time Period: Weekday AM Peak Hour of the Street
Intersection: Site Driveway 4 - Gettysburg Pike

		EB			Site Driveway 4 WB			Gettysburg Pike NB			Gettysburg Pike SB		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year	2020								413			238	
Opening Year	2022	0	0	0	0	0	0	0	419	0	0	242	0
Design Horizon Year	2027	0	0	0	0	0	0	0	435	0	0	251	0
Development Generation 221							5		0	1		1	
Development Generation 820							5		0	4		1	
Development Generation 934S							20		0	9		5	
Pass By							19		-9	9		0	
Development Generation 934N									6			3	
Development Generation 960									10			6	
Total Development Adjust		0	0	0	0	0	49	0	7	23	0	16	0
With Development	2022	0	0	0	0	0	49	0	426	23	0	258	0
With Development	2027	0	0	0	0	0	49	0	442	23	0	267	0
Adjacent Development									7			2	
Without Development	2022	0	0	0	0	0	0	0	426	0	0	244	0
Without Development	2027	0	0	0	0	0	0	0	442	0	0	253	0
With Dev & ADJ Dev	2022	0	0	0	0	0	49	0	433	23	0	260	0
With Dev & ADJ Dev	2027	0	0	0	0	0	49	0	449	23	0	269	0

Study Year: 2020
Growth Rate: 0.74
Time Period: Weekday PM Peak Hour of the Street
Intersection: Site Driveway 4 - Gettysburg Pike

		EB			Site Driveway 4 WB			Gettysburg Pike NB			Gettysburg Pike SB		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year	2020								289			375	
Opening Year	2022	0	0	0	0	0	0	0	293	0	0	381	0
Design Horizon Year	2027	0	0	0	0	0	0	0	304	0	0	395	0
Development Generation 221							2		0	1		1	
Development Generation 820							13		0	3		5	
Pass By							7		-2	2		1	
Development Generation 934S							9		0	3		3	
Pass By							8		-4	4		-2	
Development Generation 934N									3			3	
Development Generation 960									5			7	
Total Development Adjust		0	0	0	0	0	39	0	2	13	0	18	0
With Development	2022	0	0	0	0	0	39	0	295	13	0	399	0
With Development	2027	0	0	0	0	0	39	0	306	13	0	413	0
Adjacent Development									2			7	
Without Development	2022	0	0	0	0	0	0	0	295	0	0	388	0
Without Development	2027	0	0	0	0	0	0	0	306	0	0	402	0
With Dev & ADJ Dev	2022	0	0	0	0	0	39	0	297	13	0	406	0
With Dev & ADJ Dev	2027	0	0	0	0	0	39	0	308	13	0	420	0

Study Year: 2020
Growth Rate: 0.74
Time Period: Saturday Peak Hour of the Street
Intersection: Site Driveway 4 - Gettysburg Pike

		EB			Site Driveway 4 WB			Gettysburg Pike NB			Gettysburg Pike SB		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year	2020								234			209	
Opening Year	2022	0	0	0	0	0	0	0	237	0	0	212	0
Design Horizon Year	2027	0	0	0	0	0	0	0	246	0	0	220	0
Development Generation 221							3		0	1		1	
Development Generation 820							21		0	6		6	
Pass By							7		-3	3		0	
Development Generation 934 S							42		0	13		12	
Development Generation 934 N									10			10	
Development Generation 960									8			8	
Total Development Adjust		0	0	0	0	0	73	0	15	23	0	37	0
With Development	2022	0	0	0	0	0	73	0	252	23	0	249	0
With Development	2027	0	0	0	0	0	73	0	261	23	0	257	0

Traffic Volume Distribution Worksheet

Precision shown to two decimal places is for calculation purposes only. Values are rounded before placement into the intersection volume worksheets and Figures 3-6.

AM PEAK HOUR

TRAFFIC COUNT DATA

MOVEMENT	SOUTH MARKET STREET - GETTYSBURG PIKE												
	ebl	ebt	ebr	wbl	wbt	wbr	nbl	nbt	nbr	sbl	sbt	sbr
TIME												
7:00	1	51	5	28	99	10	28	13	46	9	8	9
7:15	8	67	12	34	135	17	31	19	62	8	9	18
7:30	19	83	16	36	154	18	24	24	82	7	10	11
7:45	8	63	17	53	128	28	20	18	46	13	10	13
8:00												
	36	**264**	**50**	**151**	**516**	**73**	**103**	**74**	**236**	**37**	**37**	**51**

MOVEMENT	SOUTH MARKET STREET - US15 SOUTHBOUND RAMP							US15
	ebt	ebr	wbl	wbt	sbl	sbt	sbr	sbt
	110	28	18	159	31	0	33	
	149	27	12	152	38	0	46	
	102	21	14	169	56	0	39	
	88	15	2	108	38	0	31	
	449	**91**	**46**	**588**	**163**	**0**	**149**	**2615**

MOVEMENT	SOUTH MARKET STREET - US15 NORTHBOUND RAMP							US15
	ebl	ebt	wbt	wbr	nbl	nbt	nbr	nbt
	88	50	140	74	36	0	12	
	130	59	113	63	45	0	28	
	115	45	122	78	47	1	33	
	98	30	75	52	28	0	35	
	431	**184**	**450**	**267**	**156**	**1**	**108**	**2725**

CURRENT DISTRIBUTION

ENTER

MOVEMENT: 36 | 264 | 50 | 103 | 74 | 236 | 37 | 37 | 51

TOTAL: 2182 — 350 | 413 | 125

2% | 12% | 2% | 5% | 3% | 11% | 2% | 2% | 2% — 16% | 19% | 6%

1293 | 6633 — 163 | 0 | 149 | 2615 — 312

59% — 7% | 0% | 7% | 39% — 14% | 23%

1128 | 6468 — 91 | 46 | 2615

51% — 4% | 2% | 39% — 6% | 20%

MOVEMENT: 431 | 267 | 1 | 2725

TOTAL: 699

19% | 12% | 0% | 41% — 32% to the north | 21%

EXIT

50 | 151 | 37 — 238 — 2% | 7% | 2% — 11% To the south

184 | 108 | 2725 — 292 — 8% | 5% | 19% — 13% to the east | 10%

516 | 103 | 51 — 670 — 23% | 5% | 2% — 30% to the west

ESTIMATED PRIMARY TRIP DISTRIBUTION

MOVEMENT					ebl	ebt	ebr	wbl	wbt	wbr	nbl	nbt	nbr	sbl	sbt	sbr	
Enter	100%	Capture	External	Primary		**16%**					**59%**	**19%**			**6%**		Check
MF 221	5	0	5	5				**0.80**	**2.97**			**0.95**			**0.29**		5
MD 720	0	0	0	0				**0.00**	**0.00**			**0.00**			**0.00**		0
S 820	22	2	20	20				**3.21**	**11.86**			**3.79**			**1.15**		20
2.8 FF 934	57	3	54	27				**4.33**	**16.01**			**5.11**			**1.55**		27
1.8 FF 934	37	2	35	18				**2.89**	**10.67**			**3.41**	*13.25*		**1.03**	*4.01*	18
3 FF 934	61	0	61	31		**4.97**					**18.38**	**5.87**			**1.78**		31
GS 960	224	0	224	54		**8.66**					**32.02**	**10.22**	*16.09*		**3.09**	*4.87*	54
ENTER	406	7	399	155	*13.63*		*11.23*	*41.51*		*50.41*		*29.34*			*8.88*		*155.00*
Exit	100%										**30%**	**8%**	**51%**		**11%**		
MF 221	14	3	11	11							**3.32**	**0.91**	**5.59**		**1.18**		11
MD 720	0	0	0	0							**0.00**	**0.00**	**0.00**		**0.00**		0
S 820	14	2	12	12	*+1'*						**3.62**	**0.99**	**6.10**		**1.29**		12
2.8 FF 934	56	1	55	28							**8.45**	**2.31**	**14.23**		**3.00**		28
1.8 FF 934	35	1	34	17							**5.13**	**1.40**	**8.64**		**1.82**	*7.29*	17
3 FF 934	60	0	60	31								**2.56**		**15.76**	**3.32**	**9.36**	31
GS 960	225	0	225	54								**4.45**	*7.01*	**27.45**	**5.79**	**16.30**	54
EXIT	404	7	397	153							*20.53*	*12.62*	*34.57*	*43.21*	*16.41*	*25.66*	*153.00*

MOVEMENT	ebt	ebr	wbl	wbt	sbl	sbt	sbr
Enter				**36%**			**23%**
MF 221				**1.79**			**1.17**
MD 720				**0.00**			**0.00**
S 820				**7.18**			**4.67**
2.8 FF 934				**9.69**			**6.31**
1.8 FF 934				**6.46**			**4.21**
3 FF 934				**11.13**			**7.24**
GS 960				**19.38**			**12.62**
ENTER		*91.92*	*91.85*	*55.64*	*55.64*		*36.21*
Exit							
MF 221	**31%**	**20%**					
MD 720	**3.39**	**2.20**					
S 820	**0.00**	**0.00**					
2.8 FF 934	**3.70**	**2.40**					
1.8 FF 934	**8.62**	**5.61**					
3 FF 934	**5.23**	**3.41**					
GS 960	**9.55**	**6.21**					
EXIT	**16.63**	**10.82**					
	47.11	*30.66*	*77.78*	*77.78*			

MOVEMENT	ebl	ebt	wbt	wbr	nbl	nbt	nbr
Enter			**12%**		**24%**		
MF 221			**0.58**		**1.22**		
MD 720			**0.00**		**0.00**		
S 820			**2.31**		**4.87**		
2.8 FF 934			**3.12**		**6.57**		
1.8 FF 934			**2.08**		**4.38**		
3 FF 934			**3.58**		**7.55**		
GS 960			**6.24**		**13.15**		
ENTER			*17.90*		*37.73*		
Exit							
MF 221	**21%**	**10%**					
MD 720	**2.30**	**1.09**					
S 820	**0.00**	**0.00**					
2.8 FF 934	**2.51**	**1.19**					
1.8 FF 934	**5.85**	**2.77**					
3 FF 934	**3.55**	**1.68**					
GS 960	**6.47**	**3.07**					
EXIT	**11.28**	**5.35**					
	31.95	*15.16*	*47.11*				

CORRIDOR DISTRIBUTION

MOVEMENT	ebl	ebt	ebr	wbl	wbt	wbr	nbl	nbt	nbr	sbl	sbt	sbr
	36	**264**	**50**	**151**	**516**	**73**	**103**	**74**	**236**	**37**	**37**	**51**

NORTH LOT

1585.00 — 151 | 516 | 73 — 740 — 47%

37 | 37 | 51 — 125 — 8%

264 — 537 — 33% to the east | 236 | 37

36 | 73 | 74 — 183 — 12% to the north

SOUTH LOT

1928.00 — 151 | 516 | 73 | 103 | 74 | 236 — 740 — 38% | 413 — 21%

264 — 537 — 28% to the east | 236 | 37

50 | 151 | 37 — 238 — 13% to the south

ESTIMATED PASS-BY TRIP DISTRIBUTION

MOVEMENT		ebl	ebt	ebr	wbl	wbt	wbr	nbl	nbt	nbr	sbl	sbt	sbr
Enter	100%		**28%**	**28%**	**38%**	**38%**			**21%**			**13%**	
S 820	0		**0.00**	**0.00**	**0.00**	**0.00**			**0.00**			**0.00**	
2.8 FF 934	27	*+1'*	**-7.52**	**7.52**	**10.36**	**-10.36**			**5.78**			**3.51**	
1.8 FF 934	17		**-4.73**	**4.73**	**6.52**	**-6.52**			**3.64**			**2.21**	
	100%		**33%**	**33%**		**47%**	**47%**		**12%**			**8%**	
3 FF 934	30		**9.90**	**-9.90**		**-14.01**	**14.01**		**3.46**			**2.37**	
GS 960	170		**56.10**	**-56.10**		**-79.37**	**79.37**		**19.63**			**13.41**	
ENTER	244		*66.00*	*-78.26*	*12.26*	*16.89*	*-110.26*	*93.38*	*0.00*	*32.52*	*0.00*	*0.00*	*21.49*	*0.00*
Exit	100%								**38%**	**21%**	**28%**		**13%**	
S 820	0								**0.00**	**0.00**	**0.00**		**0.00**	
2.8 FF 934	27								**10.36**	**5.78**	**7.52**		**3.51**	
1.8 FF 934	17								**6.52**	**3.64**	**4.73**		**2.21**	
	100%									**12%**		**33%**	**8%**	**47%**
3 FF 934	29									**3.48**		**9.57**	**2.29**	**13.54**
GS 960	171									**20.52**		**56.43**	**13.49**	**79.84**
EXIT	244		*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*16.89*	*33.43*	*12.26*	*66.00*	*21.49*	*93.84*

PM PEAK HOUR — SOUTH MARKET STREET - GETTYSBURG PIKE

TRAFFIC COUNT DATA

MOVEMENT	TIME	ebl	ebt	ebr	wbl	wbt	wbr	nbl	nbt	nbr	sbl	sbt	sbr
		46	**422**	**63**	**195**	**303**	**127**	**55**	**65**	**169**	**121**	**117**	**35**
	16:00	10	90	12	51	73	34	17	19	49	26	14	9
	16:15	9	110	16	53	80	32	12	18	43	27	24	8
	16:30	10	112	15	42	93	29	12	11	36	43	42	11
	16:45	17	110	20	49	57	32	14	17	41	25	37	7
	17:00	10	90	12	51	73	34	17	19	49	26	14	9
		542	**419**	**333**	**159**	**174**	**0**	**91**	**2803**				

SOUTH MARKET STREET - US15 NORTHBOUND RAMP

MOVEMENT		ebl	ebt	ebr	wbl	wbt	wbr	nbl	nbt	nbr	sbl	sbt	sbr
		122	120	92	32	40	0	14					
		175	110	91	46	52	0	25					
		130	109	83	48	45	0	21					
		115	80	67	33	37	0	31					

SOUTH MARKET STREET - US15 SOUTHBOUND RAMP

MOVEMENT		ebl	ebt	ebr	wbl	wbt	sbl	sbt	sbr
		135	26	26	111	98	0	45	
		158	26	23	120	122	0	48	
		154	40	19	106	88	0	48	
		128	51	12	82	72	0	52	
		575	**143**	**80**	**419**	**380**	**0**	**193**	**2690**

CURRENT DISTRIBUTION

MOVEMENT		ebl	ebt	ebr	wbl	wbt	wbr	nbl	nbt	nbr	sbl	sbt	sbr
		46	**422**	**63**	**195**	**303**	**127**	**55**	**65**	**169**	**121**	**117**	**35**
ENTER	2423	2%	17%	3%		31			289			273	
TOTAL			22%					2%	3%	7%	12%		11%
MOVEMENT		46	422	63		531		55	65	169	121	117	35
EXIT		2%	17%	3%				2%	3%	7%	5%	5%	1%
MOVEMENT	2440	46		65		238							
TOTAL			238						223				
		2%		3%		5%			3%				
			10% to the north										
		63	195	117									
			375										
		3%	8%	5%									
			15% To the south										
					303	55		127	65	169			
						393							
					12%	2%							
					1%								
					16% to the west								

ESTIMATED PRIMARY TRIP DISTRIBUTION

MOVEMENT		ebl	ebt	ebr	wbl	wbt	wbr	nbl	nbt	nbr	sbl	sbt	sbr
Enter	100%	Capture	External	Primary	**22%**				**55%**			**11%**	Check
MF 221	14	8	6	6		**1.31**	**3.29**			**0.72**		**0.68**	**6**
MD 720	0	0	0	0		**0.00**	**0.00**			**0.00**		**0.00**	**0**
S 820	71	34	37	25 +5'		**5.48**	**13.72**			**2.98**		**2.82**	**25**
2.8 FF 934	47	14	33	16 -1'		**3.51**	**8.78**			**1.91**		**1.80**	**16**
1.8 FF 934	31	10	21	10 -1'		**2.19**	**5.49**			**1.19**	**6.80**	**1.13**	**10**
3 FF 934	51	0	51	26	**5.70**					**3.10**		**2.93**	**26**
GS 960	183	0	183	44	**9.64**					**5.25**	**8.35**	**4.96**	**44**
MF 221	397	66	331	127	15.34	12.49	31.29			14.27		14.31	127.00
Exit	100%									**16%**	**10%**	**59%**	**15%**
MF 221	10	6	4	4						**0.64**	**0.39**	**2.35**	**0.61**	**4**
MD 720	0	0	0	0						**0.00**	**0.00**	**0.00**	**0.00**	**0**
S 820	77	28	49	32						**5.15**	**3.12**	**18.81**	**4.92**	**32**
2.8 FF 934	44	20	24	12 +1'						**1.93**	**1.17**	**7.05**	**1.84**	**12**
1.8 FF 934	28	12	16	8 +1'						**1.29**	**0.78**	**4.70**	**1.23**	**8**
3 FF 934	47	0	47	24							**2.34**		**14.10**	**3.69**	**3.87**	**24**
GS 960	184	0	184	44							**4.29**	**6.63**	**25.86**	**6.76**	**7.09**	**44**
	390	66	324	124							9.02	12.10	32.91	39.96	19.06	10.95	124.00
EXIT																	

ESTIMATED PASS-BY TRIP DISTRIBUTION

MOVEMENT		ebl	ebt	ebr	wbl	wbt	wbr	nbl	nbt	nbr	sbl	sbt	sbr
Enter	100%		**36%**		**31%**				**14%**			**19%**	
MF 221	12 +1'		**4.27**		**3.75**				**1.73**			**2.28**	
S 820	17		**6.05**		**5.31**				**2.46**			**3.23**	
2.8 FF 934	11 -1'		**3.91**		**3.44**				**1.59**			**2.09**	
1.8 FF 934	100%		**38%**		**34%**				**13%**			**15%**	
3 FF 934	25		**9.50**		**8.46**				**3.22**			**3.69**	
GS 960	139		**52.82**		**-47.01**				**17.90**			**20.53**	
	204	62.32	-76.55	14.23	-67.96	12.49	55.47	0.00	26.90	0.00	0.00	31.83	0.00
Exit	100%									**31%**	**14%**	**36%**			**19%**
S 820	17									**5.31**	**2.46**	**6.05**			**3.23**
2.8 FF 934	12									**3.75**	**1.73**	**4.27**			**2.28**
1.8 FF 934	8									**2.50**	**1.16**	**2.85**			**1.52**
	100%									**13%**		**38%**	**15%**		**34%**
3 FF 934	23									**2.96**		**8.74**	**3.40**		**7.78**
GS 960	140									**18.03**		**53.20**	**20.68**		**47.35**
	200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.56	26.34	13.17	61.94	31.11		55.47
EXIT															

CORRIDOR DISTRIBUTION

MOVEMENT		ebl	ebt	ebr	wbl	wbt	wbr	nbl	nbt	nbr	sbl	sbt	sbr
		46	**422**	**63**	**195**	**303**	**127**	**55**	**65**	**169**	**121**	**117**	**35**
	1848.00					625						273	
													15%
						34%							
					195	303	127				121	117	35
			422			712				169			
						38% to the east							
		46		65		127							
			238										
			13% to the north										
	2001.00												
					195	303	127	55	65	169			
						625							
						31%				14%			

SATURDAY PEAK HOUR

TRAFFIC COUNT DATA

SOUTH MARKET STREET - GETTYSBURG PIKE

MOVEMENT	ebl	ebt	ebr	wbl	wbt	wbr	nbl	nbt	nbr	sbl	sbt	sbr
TIME												
11:15												
11:30	2	77	12	18	93	41	13	19	29	25	22	8
11:45	12	69	14	20	94	27	17	10	34	33	22	9
12:00	8	69	7	18	70	23	10	17	27	25	19	9
12:15	6	81	13	24	73	27	16	15	27	31	20	8
	28	**296**	**46**	**80**	**330**	**118**	**56**	**61**	**117**	**114**	**83**	**34**

SOUTH MARKET STREET - US15 SOUTHBOUND RAMP

ebt	ebr	wbl	wbt	sbl	sbt	sbr	
89	17	7	128	49	0	17	
125	8	25	130	41	0	25	
125	14	12	124	39	0	17	
115	7	22	98	45	2	11	
454	**46**	**66**	**480**	**174**	**2**	**70**	**2105**

SOUTH MARKET STREET - US15 NORTHBOUND RAMP

ebl	ebt	wbt	wbr	nbl	nbt	nbr
28	116	112	58	22	0	13
33	130	114	52	43	0	9
34	131	102	56	33	1	6
29	129	79	42	39	0	14
124	**506**	**407**	**208**	**137**	**1**	**42**	**2194**

CURRENT DISTRIBUTION

ENTER

MOVEMENT: 28 | 296 | 46 | 56 | 61 | 117 | 114 | 83 | 34

TOTAL: 1876

370 (1% 16% 2%) — 20%

234 (3% 3% 6%) — 12%

231 (6% 4% 2%) — 12%

1041 | 5340

174 | 2 | 70 | 2105

246 — 9% 0% 4% — 39% — 13% — **22%**

56%

407 | 208 | 137 | 1 | 42 | 2194

615 — 22% 11% — 180 — 7% 0% 2% — 41% 19%

33% — 10% — **23%** **11%**

EXIT

MOVEMENT: 28 | 118 | 61

TOTAL: 1829

207 (2% 6% 3%) — 11% to the north

993 | **5292**

46 | 66

112 — 3% 4% — 6%

54%

2105 — 39% — **21%**

124 | 208 | 1 | 2194

333 — 7% 11% 0% — 41%

18% to the north — **22%**

46 | 80 | 83

209 — 3% 4% 5% — 12% To the south

506 | 42 | 2194

548 — 28% 2% 19% — 30% to the east — **11%**

330 | 56 | 34

420 — 18% 3% 2% — 23% to the west

ESTIMATED PRIMARY TRIP DISTRIBUTION

ENTER

MOVEMENT	Enter	100%	Capture	External	Primary	ebl	ebt	ebr	wbl	wbt	wbr	nbl	nbt	nbr	sbl	sbt	sbr	Check
						20%						**55%**	**12%**			**12%**		
MF 221	12	3	9	9					**1.78**	**4.99**			**1.12**			**1.11**		9
MD 720	0	0	0	0					**0.00**	**0.00**			**0.00**			**0.00**		0
S 820	91	26	65	48	+3'				**9.47**	**26.64**			**5.99**			**5.91**		48
2.8 FF 934	78	14	64	64					**12.62**	**35.51**			**7.98**			**7.88**		64
1.8 FF 934	50	9	41	41					**8.09**	**22.75**			**5.11**	*20.21*		**5.05**	*19.95*	41
3 FF 934	84	0	84	84		**16.57**						**46.61**	**10.48**			**10.34**		84
GS 960	186	0	186	63		**12.43**						**34.96**	**7.86**	*18.34*		**7.76**	*18.10*	63
	501	52	449	309		*28.99*		*31.95*	*89.89*		*81.57*		*38.54*			*38.05*		*309.00*

ebt	ebr	wbl	wbt	sbl	sbt	sbr
			34%			**22%**
			3.06			**1.94**
			0.00			**0.00**
			16.32			**10.32**
			21.76			**13.76**
			13.94			**8.82**
			28.56			**18.06**
			21.42			**13.55**
	171.47	*171.50*	*105.06*	*104.83*		*66.44*

ebl	ebt	wbt	wbr	nbl	nbt	nbr
			11%		**23%**	
			0.98		**2.07**	
			0.00		**0.00**	
			5.24		**11.04**	
			6.99		**14.73**	
			4.48		**9.43**	
			9.17		**19.33**	
			6.88		**14.50**	
		33.73			*71.10*	

EXIT

MOVEMENT	Exit	100%	Capture	External	Primary	ebl	ebt	ebr	wbl	wbt	wbr	nbl	nbt	nbr	sbl	sbt	sbr	Check
												23%	**11%**	**54%**		**12%**		
MF 221	12	5	7	7								**1.61**	**0.79**	**3.76**		**0.84**		7
MD 720	0	0	0	0								**0.00**	**0.00**	**0.00**		**0.00**		0
S 820	84	21	63	47	+2'							**10.79**	**5.32**	**25.25**		**5.64**		47
2.8 FF 934	76	18	58	58	-1'							**13.32**	**6.56**	**31.16**		**6.96**		58
1.8 FF 934	49	11	38	38								**8.73**	**4.30**	**20.41**		**4.56**		38
3 FF 934	81	0	81	81									**9.17**		**43.51**	**9.72**	**18.60**	81
GS 960	186	0	186	63									**7.13**	*16.30*	**33.84**	**7.56**	**14.47**	63
	488	55	433	294								*34.45*	*33.27*	*80.58*	*77.36*	*35.28*	*33.07*	*294.00*

ebt	ebr	wbl	wbt	sbl	sbt	sbr
33%	**21%**					
2.30	**1.46**					
0.00	**0.00**					
15.46	**9.82**					
19.08	**12.12**					
12.50	**7.94**					
26.64	**16.93**					
20.72	**13.17**					
96.70	*61.45*	*158.14*	*157.93*			

ebl	ebt	wbt	wbr	nbl	nbt	nbr
	22%	**11%**				
	1.56	**0.74**				
	0.00	**0.00**				
	10.48	**4.97**				
	12.94	**6.14**				
	8.48	**4.02**				
	18.07	**8.57**				
	14.05	**6.67**				
	65.58	*31.12*	*96.70*			

CORRIDOR DISTRIBUTION

MOVEMENT: **28 | 296 | 46 | 80 | 330 | 118 | 56 | 61 | 117 | 114 | 83 | 34**

NORTH LOT

1493.00

80 | 330 | 118 — 528 — 35%

114 | 83 | 34 — 231 — 15%

296 | 117 | 114 — 527 — 35% to the east

28 | 118 | 61 — 207 — 14% to the north

SOUTH LOT

1498.00

80 | 330 | 118 | 56 | 61 | 117 — 528 — 35% — 234 — 16%

296 | 117 | 114 — 527 — 35% to the east

46 | 80 | 83 — 209 — 14% to the south

ESTIMATED PASS-BY TRIP DISTRIBUTION

MOVEMENT		100%	ebl	ebt	ebr	wbl	wbt	wbr	nbl	nbt	nbr	sbl	sbt	sbr
	Enter			**35%**	**35%**	**35%**	**35%**			**16%**			**14%**	
	S 820	17	+1'	**-5.98**	**5.98**	**5.99**	**-5.99**			**2.66**			**2.38**	
	2.8 FF 934	0		**0.00**	**0.00**	**0.00**	**0.00**			**0.00**			**0.00**	
	1.8 FF 934	0		**0.00**	**0.00**	**0.00**	**0.00**			**0.00**			**0.00**	
		100%		**35%**	**35%**			**35%**	**35%**		**14%**			**15%**
ENTER	3 FF 934	0		**0.00**	**0.00**			**0.00**	**0.00**		**0.00**			**0.00**
	GS 960	123		**43.05**	**-43.05**			**-43.50**	**43.50**		**17.05**			**19.03**
		140		*43.05*	*-49.03*	*5.98*	*5.99*	*-49.49*	*43.50*	*0.00*	*19.71*	*0.00*	*0.00*	*21.41*	*0.00*
	Exit	100%								**35%**	**16%**	**35%**		**14%**	
	S 820	16								**5.66**	**2.50**	**5.63**		**2.24**	
	2.8 FF 934	0								**0.00**	**0.00**	**0.00**		**0.00**	
	1.8 FF 934	0								**0.00**	**0.00**	**0.00**		**0.00**	
		100%									**14%**		**35%**	**15%**	**35%**
	3 FF 934	0									**0.00**		**0.00**	**0.00**	**0.00**
	GS 960	123									**17.05**		**43.05**	**19.03**	**43.50**
EXIT		139		*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*5.66*	*19.55*	*5.63*	*43.05*	*21.27*	*43.85*

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	151-237 Gettysburg Pike	**Organization:**	ALPHA
Project Location:	Upper Allen Township	**Performed By:**	
Scenario Description:	South Lot Mixed Use	**Date:**	12/27/2021
Analysis Year:	2022 Opening Year	**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	820	38,800	SF	36	22	14
Restaurant	934	4,600	SF	185	94	91
Cinema/Entertainment				0		
Residential	221	54	Units	19	5	14
Hotel				0		
All Other Land Uses[2]				0		
				240	121	119

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office						
Retail	1.00			1.00		
Restaurant	1.00			1.00		
Cinema/Entertainment						
Residential	1.00			1.00		
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		2	0	0	0
Restaurant	0	2		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	3	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	240	121	119
Internal Capture Percentage	6%	6%	6%
External Vehicle-Trips[5]	226	114	112
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	9%	14%
Restaurant	5%	2%
Cinema/Entertainment	N/A	N/A
Residential	0%	21%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	151-237 Gettysburg Pike
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	22	22	1.00	14	14
Restaurant	1.00	94	94	1.00	91	91
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	5	5	1.00	14	14
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	4		2	0	2	0
Restaurant	28	13		0	4	3
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	3	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		7	22	0	0	0
Retail	0		47	0	0	0
Restaurant	0	2		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	4	19	0		0
Hotel	0	1	6	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	2	20	22	20	0	0
Restaurant	5	89	94	89	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	5	5	5	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	2	12	14	12	0	0
Restaurant	2	89	91	89	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	3	11	14	11	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	151-237 Gettysburg Pike	**Organization:**	ALPHA
Project Location:	Upper Allen Township	**Performed By:**	
Scenario Description:	South Lot Mixed Use	**Date:**	12/27/2021
Analysis Year:	2022 Opening Year	**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	820	38,800	SF	148	71	77
Restaurant	934	4,600	SF	150	78	72
Cinema/Entertainment				0		
Residential	221	54	Units	24	14	10
Hotel				0		
All Other Land Uses[2]				0		
				322	163	159

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office						
Retail	1.00			1.00		
Restaurant	1.00			1.00		
Cinema/Entertainment						
Residential	1.00			1.00		
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail					50	
Restaurant					350	
Cinema/Entertainment						
Residential		50	350			
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		22	0	6	0
Restaurant	0	30		0	2	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	4	2	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	322	163	159
Internal Capture Percentage	41%	40%	42%
External Vehicle-Trips[5]	190	97	93
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	48%	36%
Restaurant	31%	44%
Cinema/Entertainment	N/A	N/A
Residential	57%	60%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	151-237 Gettysburg Pike
Analysis Period:	**PM Street Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	71	71	1.00	77	77
Restaurant	1.00	78	78	1.00	72	72
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	14	14	1.00	10	10
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	2		22	3	20	4
Restaurant	2	30		6	13	5
Cinema/Entertainment	0	0	0		0	0
Residential	0	4	2	0		0
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		6	2	0	1	0
Retail	0		23	0	6	0
Restaurant	0	36		0	2	0
Cinema/Entertainment	0	3	2		1	0
Residential	0	7	10	0		0
Hotel	0	1	4	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	34	37	71	37	0	0
Restaurant	24	54	78	54	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	8	6	14	6	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	28	49	77	49	0	0
Restaurant	32	40	72	40	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	6	4	10	4	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

HCM Worksheets

HV%

151-237 Gettysburg Pike 319590 1

Upper Allen Township, Cumberland Co., PA

Intersection: South Market Street - Gettysburg Pike

Time Period: Weekday AM Peak Hour of the Street

	South Market Street EB			South Market Street WB			Gettysburg Pike NB			Gettysburg Pike SB		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year 2020	36	264	50	151	516	73	103	74	236	37	37	51
Trucks	1	5	1	1	8	2	0	0	0	0	0	0
Bus	1	7	2	0	8	0	4	0	0	0	0	3
HV%	6%	5%	6%	1%	3%	3%	4%	0%	0%	0%	0%	6%
Build	117	194	76	216	441	74	145	96	281	146	51	174
Trucks	1	5	1	1	8	2	0	0	0	0	0	0
Bus	1	7	2	0	8	0	4	0	0	0	0	3
HV%	2%	6%	4%	1%	4%	3%	3%	0%	0%	0%	0%	2%

Time Period: Weekday PM Peak Hour of the Street

	South Market Street EB			South Market Street WB			Gettysburg Pike NB			Gettysburg Pike SB		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year 2020	46	422	63	195	303	127	55	65	169	121	117	35
Trucks	0	4	3	0	3	0	0	0	5	0	0	0
Bus	0	1	0	0	0	1	0	0	0	0	0	0
HV%	0%	1%	5%	0%	1%	1%	0%	0%	3%	0%	0%	0%
Build	128	381	94	236	249	128	78	79	223	224	133	102
Trucks	0	4	3	0	3	0	0	0	5	0	0	0
Bus	0	1	0	0	0	1	0	0	0	0	0	0
HV%	0%	1%	3%	0%	1%	1%	0%	0%	2%	0%	0%	0%

Time Period: Saturday Peak Hour of the Street

	South Market Street EB			South Market Street WB			Gettysburg Pike NB			Gettysburg Pike SB		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year 2020	28	296	46	80	330	118	56	61	117	114	83	34
Trucks	0	0	0	0	1	0	0	0	0	0	0	0
Bus	0	0	0	0	0	0	0	0	0	0	0	0
HV%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Build	100	251	89	196	283	119	103	99	223	236	127	111
Trucks	0	0	0	0	1	0	0	0	0	0	0	0
Bus	0	0	0	0	0	0	0	0	0	0	0	0
HV%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

HV%

151-237 Gettysburg Pike 319590 2

Upper Allen Township, Cumberland Co., PA

Intersection: South Market Street - US 15 Southbound Ramp

Time Period: Weekday AM Peak Hour of the Street

	South Market Street EB			South Market Street WB			US 15 Southbound Ramp NB			US 15 Southbound Ramp SB		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year 2020		449	91	46	588					163	0	149
Trucks		12	2	1	15					4	0	5
Bus		8	1	0	5					1	0	0
HV%		4%	3%	2%	3%					3%	0%	3%

Build		502	122	46	675					164	0	195
Trucks		12	2	1	15					4	0	5
Bus		8	1	0	5					1	0	0
HV%		4%	2%	2%	3%					3%	0%	3%

Time Period: Weekday PM Peak Hour of the Street

	South Market Street EB			South Market Street WB			US 15 Southbound Ramp NB			US 15 Southbound Ramp SB		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year 2020		575	143	80	419					380	0	193
Trucks		4	0	0	5					1	0	2
Bus		0	0	0	4					0	0	0
HV%		1%	0%	0%	2%					1%	0%	1%

Build		656	180	81	469					383	0	224
Trucks		4	0	0	5					1	0	2
Bus		0	0	0	4					0	0	0
HV%		1%	0%	0%	2%					1%	0%	1%

Time Period: Saturday Peak Hour of the Street

	South Market Street EB			South Market Street WB			US 15 Southbound Ramp NB			US 15 Southbound Ramp SB		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year 2020		454	46	66	480					174	2	70
Trucks		5	0	0	0					1	0	1
Bus		0	0	0	0					0	0	0
HV%		1%	0%	0%	0%					1%	0%	1%

Build		566	115	66	602					175	2	145
Trucks		5	0	0	0					1	0	1
Bus		0	0	0	0					0	0	0
HV%		1%	0%	0%	0%					1%	0%	1%

HV%

151-237 Gettysburg Pike 319590 3

Upper Allen Township, Cumberland Co., PA

Intersection: South Market Street - US 15 Northbound Ramp

Time Period: Weekday AM Peak Hour of the Street

	South Market Street EB			South Market Street WB			US 15 Northbound Ramp NB			US 15 Northbound Ramp SB		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year 2020	431	184			450	267	156	1	108			
Trucks	12	4			3	0	12	0	1			
Bus	0	8			5	0	0	0	0			
HV%	4%	6%			3%	0%	8%	0%	1%			

Build	469	201			489	269	204	1	109			
Trucks	12	4			3	0	12	0	1			
Bus	0	8			5	0	0	0	0			
HV%	3%	6%			2%	0%	6%	0%	1%			

Time Period: Weekday PM Peak Hour of the Street

	South Market Street EB			South Market Street WB			US 15 Northbound Ramp NB			US 15 Northbound Ramp SB		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year 2020	542	419			333	159	174	0	91			
Trucks	2	2			3	2	2	0	3			
Bus	0	0			4	0	0	0	0			
HV%	1%	1%			2%	1%	1%	0%	3%			

Build	595	450			352	160	205	0	92			
Trucks	2	2			3	2	2	0	3			
Bus	0	0			4	0	0	0	0			
HV%	1%	1%			2%	1%	1%	0%	3%			

Time Period: Saturday Peak Hour of the Street

	South Market Street EB			South Market Street WB			US 15 Northbound Ramp NB			US 15 Northbound Ramp SB		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year 2020	124	506			407	208	137	1	42			
Trucks	2	0			0	0	0	0	0			
Bus	0	0			0	0	0	0	0			
HV%	2%	0%			0%	0%	0%	0%	0%			

Build	199	545			448	210	218	1	42			
Trucks	2	0			0	0	0	0	0			
Bus	0	0			0	0	0	0	0			
HV%	1%	0%			0%	0%	0%	0%	0%			

HV%

151-237 Gettysburg Pike 319590 4

Upper Allen Township, Cumberland Co., PA

Intersection: Site Driveway 1 - Gettysburg Pike

Time Period: Weekday AM Peak Hour of the Street

	South Market Street EB			South Market Street WB			Gettysburg Pike NB			Gettysburg Pike SB		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year 2020								183			125	
Trucks								3			0	
Bus								1			3	
HV%								2%			2%	

Build								166			117	
Trucks								3			0	
Bus								1			3	
HV%								2%			3%	

Time Period: Weekday PM Peak Hour of the Street

	South Market Street EB			South Market Street WB			Gettysburg Pike NB			Gettysburg Pike SB		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year 2020								183			125	
Trucks								3			0	
Bus								1			3	
HV%								2%			2%	

Build								228			257	
Trucks								3			0	
Bus								1			3	
HV%								2%			1%	

Time Period: Saturday Peak Hour of the Street

	South Market Street EB			South Market Street WB			Gettysburg Pike NB			Gettysburg Pike SB		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year 2020								183			125	
Trucks								3			0	
Bus								1			3	
HV%								2%			2%	

Build								65			86	
Trucks								3			0	
Bus								1			3	
HV%								6%			4%	

HV%

151-237 Gettysburg Pike 319590 5

Upper Allen Township, Cumberland Co., PA

Intersection: South Market Street - Site Driveway 2

Time Period: Weekday AM Peak Hour of the Street

	South Market Street EB			South Market Street WB			Gettysburg Pike NB			Gettysburg Pike SB		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year 2020					740							
Trucks					3							
Bus					1							
HV%					1%							

Build					730							
Trucks					3							
Bus					1							
HV%					1%							

Time Period: Weekday PM Peak Hour of the Street

	South Market Street EB			South Market Street WB			Gettysburg Pike NB			Gettysburg Pike SB		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year 2020					740							
Trucks					3							
Bus					1							
HV%					1%							

Build					613							
Trucks					3							
Bus					1							
HV%					1%							

Time Period: Saturday Peak Hour of the Street

	South Market Street EB			South Market Street WB			Gettysburg Pike NB			Gettysburg Pike SB		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year 2020					740							
Trucks					3							
Bus					1							
HV%					1%							

Build					598							
Trucks					3							
Bus					1							
HV%					1%							

HV%

151-237 Gettysburg Pike 319590 6

Upper Allen Township, Cumberland Co., PA

Intersection: Site Driveway 1 - Gettysburg Pike

Time Period: Weekday AM Peak Hour of the Street

	South Market Street EB			South Market Street WB			Gettysburg Pike NB			Gettysburg Pike SB		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year 2020								413			238	
Trucks								4			2	
Bus								0			2	
HV%								1%			2%	

Build								478			246	
Trucks								4			2	
Bus								0			2	
HV%								1%			2%	

Time Period: Weekday PM Peak Hour of the Street

	South Market Street EB			South Market Street WB			Gettysburg Pike NB			Gettysburg Pike SB		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year 2020								183			125	
Trucks								3			0	
Bus								1			3	
HV%								2%			2%	

Build								334			390	
Trucks								3			0	
Bus								1			3	
HV%								1%			1%	

Time Period: Saturday Peak Hour of the Street

	South Market Street EB			South Market Street WB			Gettysburg Pike NB			Gettysburg Pike SB		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year 2020								183			125	
Trucks								4			0	
Bus								0			3	
HV%								2%			2%	

Build								171			100	
Trucks								3			0	
Bus								1			3	
HV%								2%			3%	

HV%

151-237 Gettysburg Pike 319590 7

Upper Allen Township, Cumberland Co., PA

Intersection: Site Driveway 1 - Gettysburg Pike

Time Period: Weekday AM Peak Hour of the Street

	South Market Street EB			South Market Street WB			Gettysburg Pike NB			Gettysburg Pike SB		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year 2020								413			238	
Trucks								4			2	
Bus								0			2	
HV%								1%			2%	

Build								431			258	
Trucks								3			0	
Bus								1			3	
HV%								1%			1%	

Time Period: Weekday PM Peak Hour of the Street

	South Market Street EB			South Market Street WB			Gettysburg Pike NB			Gettysburg Pike SB		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year 2020								183			125	
Trucks								3			0	
Bus								1			3	
HV%								2%			2%	

Build								295			408	
Trucks								3			0	
Bus								1			3	
HV%								1%			1%	

Time Period: Saturday Peak Hour of the Street

	South Market Street EB			South Market Street WB			Gettysburg Pike NB			Gettysburg Pike SB		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Study Year 2020								183			125	
Trucks								4			0	
Bus								0			3	
HV%								2%			2%	

Build								77			125	
Trucks								3			0	
Bus								1			3	
HV%								5%			3%	

3) The urban core land use context should be used for urban cores and major city centers that have the highest density development and a high amount of non-automobile traffic (i.e. pedestrian, bicycle, transit traffic).

Similarly, in application of the HCM2010 recommended default values, when necessary, the traffic analysis project should identify whether or not the given project area or facility is located within a metropolitan area with a population equal to or greater than 250,000 inhabitants. The definition for metropolitan areas should be based on the most recent guidance regarding metropolitan statistical areas (MSA) as defined by the United States Census Bureau. Since the HCM2010 provides default values for only two possible land use context scenarios, it is important for the analyst to first determine whether or not a project is located in a MSA based on this guidance. These definitions should be used to identify the appropriate default values.

Base Saturation Flow Rates

Traffic analysis projects should use the Pennsylvania default values for base saturation flow rates as provided in Exhibit 10-9 below, unless local data is available, for the analysis of isolated and coordinated signalized intersections as well as urban street facilities, according to the corresponding land use context. The default base saturation flow rates in Exhibit 10-9 are not appropriate for use by other procedures or for the analysis of other facility types. Typically, a single base saturation flow rate should be used for all movements of a signalized intersection.

Exhibit 10-9 Pennsylvania Base Saturation Flow Rates (Signalized Intersections)

Base Saturation Flow Rates	*HCM2010 Defaults (pcphpl)*		Pennsylvania Defaults (pcphpl)		
	Metropolitan Areas	*Other*	**Urban Core**	**Suburban**	**Rural**
Signalized Intersections and Urban Streets	*1900*	*1750*	**2100**	**1800**	**1650**

Start-Up Lost Time, Extension of Effective Green Time, and Sneakers

Traffic analysis projects should use the Pennsylvania default values for start-up lost time, extension of effective green time, and number of left-turn sneakers as provided in Exhibit 10-10, unless local data is available, for the analysis of isolated and coordinated signalized intersections as well as urban street facilities, according to the corresponding land use context as well as total clearance time (yellow plus all-red time) for subject signal phase. Typically, start-up lost time and extension of effective green time should be applied on a movement basis for each signal phase at the subject signalized intersection. Typically, a single intersection-wide value should be provided for the number of left-turn sneakers.

Exhibit 10-10 Pennsylvania Traffic Signal Control Calibration Parameters (Signalized Intersections)

Traffic Signal Control Parameters	*HCM2010 Defaults*		Pennsylvania Defaults (seconds, or number of vehicles)		
	All Areas		**Urban Core**	**Suburban**	**Rural**
Start-Up Lost Time	*2.0 seconds*		**2.5 seconds**	**2.5 seconds**	**3.0 seconds**
Extension of Effective Green Time	*2.0 seconds*		**3.0 seconds when** Y+AR < 6.0 seconds, otherwise **4.0 seconds**	**3.0 seconds when** Y+AR < 5.0 seconds, otherwise **3.5 seconds**	**2.0 seconds when** Y+AR < 4.5 seconds otherwise **2.5 seconds**
Number of Left Turn Sneakers	*2 vehicles*		2 vehicles	2 vehicles	2 vehicles

Y = Yellow change interval

AR = All-red clearance interval

Y+AR = 5> Lost time adjust = 2.5-3.5 = -1

Base Critical Headway at Two-Way Stop-Controlled (TWSC) Intersections

Traffic analysis projects should use the Pennsylvania default values for base critical headways as provided in Exhibit 10-11, unless local data is available, for the analysis of unsignalized two-way stop-controlled intersections, according to the corresponding land use context and critical movements shown below. The values provided in Exhibit 10-11 are for single or one-stage maneuvers only along two-lane and four-lane roadways. The default critical headway values for two-stage maneuvers and six-lane roadways as presented in HCM2010 Chapter 19 should be used for those facility types, unless additional local data is available. Base critical headways should be applied for each critical movement at the subject intersection.

Exhibit 10-11 Base Critical Headways at TWSC Intersections

Base Critical Headways at TWSC Intersections (by critical movement)	*HCM2010 Defaults (seconds)*		Pennsylvania Defaults (seconds) for 1-Stage Maneuvers					
	All Areas		Urban Core		Suburban		Rural	
	Two Lanes	*Four Lanes*	Two Lanes	Four Lanes	Two Lanes	Four Lanes	Two Lanes	Four Lanes
Left Turn from Major Roadway	*4.1*	*4.1*	**4.1**	**3.7**	**4.3**	**3.9**	**4.9**	**5.2**
U-Turn from Major Roadway**	*N/A*	*6.4 (wide) 9.9 (narrow)*	**N/A**	**6.4 (wide) 9.9 (narrow)**	**N/A**	**6.4 (wide) 9.9 (narrow)**	**N/A**	**6.4 (wide) 9.9 (narrow)**
Right Turn from Minor Roadway	*6.2*	*6.9*	**6.2**	**6.1**	**6.2**	**7.2**	**6.4**	**6.1**
Through Traffic on Minor (1 stage only)	*6.5*	*6.5*	**6.5**	**6.5**	**6.5**	**6.5**	**6.5**	**6.5**
Left Turn from Minor (1 Stage only)	*7.1*	*7.5*	**7.1**	**6.7**	**7.1**	**8.4**	**8.1**	**8.3**

**Consult with District Traffic Engineer before using wide or narrow values

Base Follow-Up Headway at Two-Way Stop Controlled (TWSC) Intersections

Traffic analysis projects should use the Pennsylvania default values for base follow-up times for one-stage and two-stage maneuvers as provided in Exhibit 10-12, unless local data is available, for the analysis of unsignalized two-way stop-controlled intersections, according to the corresponding land use context and critical movements shown below. The default critical headway values for six-lane roadways as presented in HCM2010 Chapter 19 should be used for those facility types, unless additional local data is available. Base follow-up headways should be applied for each critical movement at the subject intersection.

Exhibit 10-12 Base Follow-Up Headways at TWSC Intersections

Base Follow Up Headways at TWSC Intersections (by critical movement)	*HCM2010 Defaults (seconds)*		Pennsylvania Defaults (seconds) for 1-Stage and 2-Stage Maneuvers					
	All Areas		Urban Core		Suburban		Rural	
	Two Lanes	*Four Lanes*	Two Lanes	Four Lanes	Two Lanes	Four Lanes	Two Lanes	Four Lanes
Left Turn from Major Roadway	*2.2*	*2.2*	**2.2**	**2.8**	**3.0**	**2.4**	**3.5**	**3.4**
U-Turn from Major Roadway**	*N/A*	*2.5 (wide) 3.1 (narrow)*	*N/A*	*2.5 (wide) 3.1 (narrow)*	*N/A*	*2.5 (wide) 3.1 (narrow)*	*N/A*	*2.5 (wide) 3.1 (narrow)*
Right Turn from Minor Roadway	*3.3*	*3.3*	**3.3**	**3.2**	**3.1**	**2.9**	**3.4**	**3.1**
Through Traffic on Minor	*4.0*	*4.0*	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**
Left Turn from Minor	*3.5*	*3.5*	**3.5**	**2.5**	**3.0**	**2.8**	**3.0**	**3.4**

**Consult with District Traffic Engineer before using wide or narrow values

Multi-Period Analysis

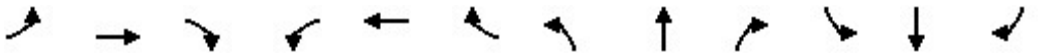
For the operational analysis of signalized intersections, urban streets, and freeway facilities, traffic analysis projects should use the **multi-period analysis**, sometimes referred to as Approach C in the HCM2010. The multi-period analysis procedure accounts for the carryover of unmet demand from one time period to the next during periods of oversaturation. For a multi-period analysis, the peak hour factors for all movements should be equal to 1.0 and at least four consecutive 15-minute intervals through the identified peak period should be analyzed and compiled, using an analysis period duration (T) of 0.25 hours, or 15 minutes. If the necessary data is unavailable and the facility and its comprising movements are under capacity, the traditional Approach A method may be used, such that the intersection peak hour factor may be less than 1.0 and the analysis period duration (T) is equal to 0.25 hours, or 15 minutes. Approach A may not be appropriate for all projects, as it neglects queue carryover from one period and may not adequately include the initial queue delay (d_3) component of the control delay equation (for signalized intersections and urban street facilities).

When utilizing the multi-period analysis, the guidance provided by the HCM2010 should be followed. The analyst should include at least four (4) consecutive 15-minute intervals such that the duration of the period of oversaturation is addressed. For projects that need the results for a single analysis period from which to derive results and/or conclusions, the analyst may use just the 15-minute interval reflecting the highest valued of aggregated intersection control delay; otherwise, the results from each 15-minute interval throughout the analysis period should be used.

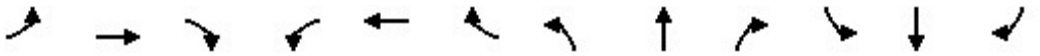
Critical Headway									
Intersection #		Movement	PennDOT Base Value	Hvy Veh Lane Factor	Hvy Veh %	Minor Street Grade Factor	Grade	T intersection Factor for Minor Street	Critical Headway for Movement
4 Site Driveway 1	Major	NBL							0.0
		SBL	4.3	1	0		1		4.3
	Minor	WBL	7.1	1	0	0.2	0	0.7	6.4
		WBR	6.2	1	0	0.1	0		6.2
6 Site Driveway 3	Major	NBL							0.0
		SBL	4.3	1	0		4		4.3
	Minor	WBL	7.1	1	0	0.2	-1	0.7	6.2
		WBR	6.2	1	0	0.1	-1		6.1
7 Site Driveway 4	Major	NBL							0.0
		SBL							0.0
	Minor	WBL							0.0
		WBR	6.2	1	0	0.1	1		6.3

Follow-up Headway						
Intersection #		Movement	PennDOT Base Value	Lane Factor	Hvy Veh %	Follow-up Headway for Movement
4 Site Driveway 1	Major	NBL				
		SBL	3.0	0.9	0	3.0
	Minor	WBL	3.0	0.9	0	3.0
		WBR	3.1	0.9	0	3.1
6 Site Driveway 3	Major					
		SBL	3.0	0.9	0	3.0
	Minor	WBL	3.0	0.9	0	3.0
		WBR	3.1	0.9	0	3.1
7 Site Driveway 4	Major	NBL				
		SBL				
	Minor	WBL				
		WBR	3.1	0.9	0	3.1

2020 Baseline Scenario
AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	264	50	151	516	73	103	74	236	37	37	51
Future Volume (vph)	36	264	50	151	516	73	103	74	236	37	37	51
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		0	200		185	175		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	50			75			100			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.976				0.850		0.886			0.913	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1591	1647	0	1604	1713	1456	1542	1603	0	1645	1633	0
Flt Permitted	0.245			0.402			0.620			0.278		
Satd. Flow (perm)	410	1647	0	679	1713	1456	1007	1603	0	481	1633	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13				178		168			61	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			569			553			571	
Travel Time (s)		14.1			9.7			15.1			11.1	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	6%	5%	6%	1%	3%	3%	4%	0%	0%	0%	0%	6%
Adj. Flow (vph)	43	314	60	180	614	87	123	88	281	44	44	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	374	0	180	614	87	123	369	0	44	105	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	34	34		34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40		40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0		3.0	10.0	10.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	10.6	39.6		9.6	16.6	16.6	10.5	9.5		9.5	9.5	
Total Split (s)	13.0	38.0		13.0	38.0	38.0	13.0	21.0		13.0	21.0	
Total Split (%)	15.3%	44.7%		15.3%	44.7%	44.7%	15.3%	24.7%		15.3%	24.7%	
Maximum Green (s)	6.7	31.6		6.7	31.6	31.6	7.8	15.6		7.8	15.6	
Yellow Time (s)	3.0	4.4		3.0	4.4	4.4	3.0	3.0		3.0	3.0	
All-Red Time (s)	3.3	2.0		3.3	2.0	2.0	2.2	2.4		2.2	2.4	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	5.3	5.4		5.3	5.4	5.4	4.2	4.4		4.2	4.4	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0		3.0	6.0	6.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0		0.0	25.0	25.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0		0.0	13.0	13.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		26.0			26.0	26.0		17.0			17.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	46.0	38.6		48.4	43.7	43.7	21.5	16.0		20.2	13.3	
Actuated g/C Ratio	0.54	0.45		0.57	0.51	0.51	0.25	0.19		0.24	0.16	
v/c Ratio	0.13	0.50		0.38	0.70	0.10	0.40	0.84		0.20	0.34	
Control Delay	10.1	20.7		9.6	23.4	0.4	25.7	36.6		21.5	17.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	10.1	20.7		9.6	23.4	0.4	25.7	36.6		21.5	17.8	
LOS	B	C		A	C	A	C	D		C	B	
Approach Delay		19.6			18.3			33.9			18.9	
Approach LOS		B			B			C			B	
Queue Length 50th (ft)	8	119		30	265	0	37	83		12	16	
Queue Length 95th (ft)	19	173		m42	#379	m1	64	#170		28	45	
Internal Link Dist (ft)		747			489			473			491	
Turn Bay Length (ft)	175			200		185	175			150		
Base Capacity (vph)	330	754		470	880	835	309	459		236	368	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.13	0.50		0.38	0.70	0.10	0.40	0.80		0.19	0.29	

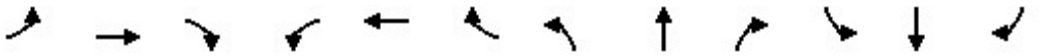
Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 85			
Offset: 77 (91%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 22.6		Intersection LOS: C	
Intersection Capacity Utilization 70.9%		ICU Level of Service C	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

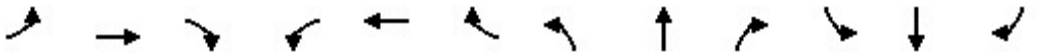
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	449	91	46	588	0	0	0	0	163	0	149
Future Volume (vph)	0	449	91	46	588	0	0	0	0	163	0	149
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	100		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.936	
Flt Protected				0.950							0.975	
Satd. Flow (prot)	0	1731	1485	1621	1748	0	0	0	0	0	1718	0
Flt Permitted				0.357							0.975	
Satd. Flow (perm)	0	1731	1485	609	1748	0	0	0	0	0	1718	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			122								128	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		569			608			453			537	
Travel Time (s)		9.7			10.4			10.3			12.2	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	4%	3%	2%	3%	0%	0%	0%	0%	3%	0%	3%
Adj. Flow (vph)	0	510	103	52	668	0	0	0	0	185	0	169
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	510	103	52	668	0	0	0	0	0	354	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												

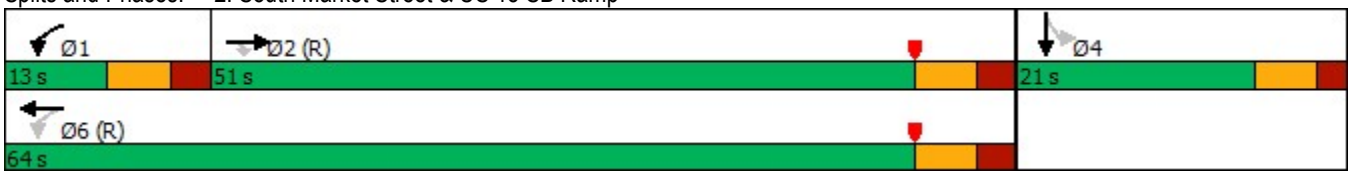


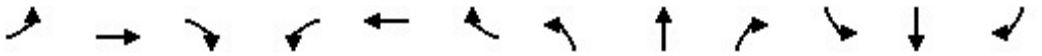
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		51.0	51.0	13.0	64.0					21.0	21.0	
Total Split (%)		60.0%	60.0%	15.3%	75.3%					24.7%	24.7%	
Maximum Green (s)		44.5	44.5	6.5	57.5					15.0	15.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	1.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		52.5	52.5	59.4	59.4						15.1	
Actuated g/C Ratio		0.62	0.62	0.70	0.70						0.18	
v/c Ratio		0.48	0.11	0.11	0.55						0.86	
Control Delay		9.4	1.9	0.8	2.6						43.3	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		9.4	1.9	0.8	2.6						43.3	
LOS		A	A	A	A						D	
Approach Delay		8.1			2.4						43.3	
Approach LOS		A			A						D	
Queue Length 50th (ft)		103	3	1	10						94	
Queue Length 95th (ft)		m139	m10	m1	m21						#199	
Internal Link Dist (ft)		489			528			373			457	
Turn Bay Length (ft)			125	100								
Base Capacity (vph)		1069	964	514	1221						427	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.48	0.11	0.10	0.55						0.83	

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 85			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 13.1		Intersection LOS: B	
Intersection Capacity Utilization 78.9%		ICU Level of Service D	
Analysis Period (min) 15			

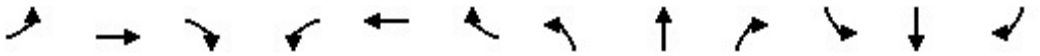
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US 15 SB Ramp





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	431	184	0	0	450	267	156	1	108	0	0	0
Future Volume (vph)	431	184	0	0	450	267	156	1	108	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.945				
Flt Protected	0.950							0.971				
Satd. Flow (prot)	1644	1642	0	0	1748	1479	0	1685	0	0	0	0
Flt Permitted	0.299							0.971				
Satd. Flow (perm)	517	1642	0	0	1748	1479	0	1685	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						293		36				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	4%	6%	0%	0%	3%	0%	8%	0%	1%	0%	0%	0%
Adj. Flow (vph)	474	202	0	0	495	293	171	1	119	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	474	202	0	0	495	293	0	291	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												

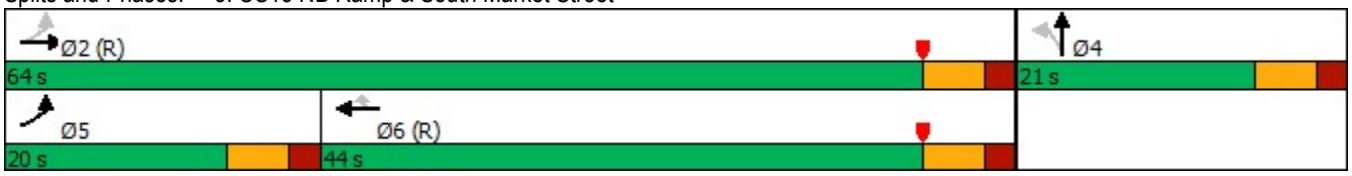


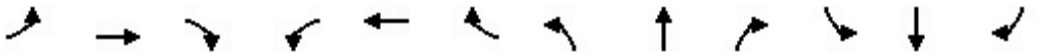
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	20.0	64.0			44.0	44.0	21.0	21.0				
Total Split (%)	23.5%	75.3%			51.8%	51.8%	24.7%	24.7%				
Maximum Green (s)	14.0	58.0			38.0	38.0	15.0	15.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	3.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	59.4	59.4			40.1	40.1		15.6				
Actuated g/C Ratio	0.70	0.70			0.47	0.47		0.18				
v/c Ratio	0.86	0.18			0.60	0.34		0.86				
Control Delay	39.2	3.2			20.8	3.0		55.1				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	39.2	3.2			20.8	3.0		55.1				
LOS	D	A			C	A		E				
Approach Delay		28.5			14.2			55.1				
Approach LOS		C			B			E				
Queue Length 50th (ft)	194	18			154	0		107				
Queue Length 95th (ft)	#244	m24			236	33		#217				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	560	1148			824	852		346				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.85	0.18			0.60	0.34		0.84				

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 85			
Offset: 56 (66%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 26.5		Intersection LOS: C	
Intersection Capacity Utilization 78.9%		ICU Level of Service D	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: US15 NB Ramp & South Market Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	264	50	151	516	73	103	74	236	37	37	51
Future Volume (veh/h)	36	264	50	151	516	73	103	74	236	37	37	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1864	1878	1864	1697	1669	1669	1780	1837	1837	1794	1866	1710
Adj Flow Rate, veh/h	43	314	55	180	614	60	123	88	175	44	44	40
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	6	5	6	1	3	3	4	0	0	0	0	6
Cap, veh/h	509	702	123	534	845	716	366	105	208	195	128	116
Arrive On Green	0.04	0.45	0.45	0.18	1.00	1.00	0.09	0.19	0.19	0.04	0.14	0.14
Sat Flow, veh/h	1775	1556	273	1616	1669	1414	1696	549	1092	1709	900	819
Grp Volume(v), veh/h	43	0	369	180	614	60	123	0	263	44	0	84
Grp Sat Flow(s),veh/h/ln	1775	0	1829	1616	1669	1414	1696	0	1641	1709	0	1719
Q Serve(g_s), s	1.1	0.0	11.8	4.8	0.0	0.0	5.0	0.0	13.1	1.8	0.0	3.7
Cycle Q Clear(g_c), s	1.1	0.0	11.8	4.8	0.0	0.0	5.0	0.0	13.1	1.8	0.0	3.7
Prop In Lane	1.00		0.15	1.00		1.00	1.00		0.67	1.00		0.48
Lane Grp Cap(c), veh/h	509	0	825	534	845	716	366	0	312	195	0	244
V/C Ratio(X)	0.08	0.00	0.45	0.34	0.73	0.08	0.34	0.00	0.84	0.23	0.00	0.34
Avail Cap(c_a), veh/h	608	0	825	534	845	716	390	0	320	302	0	336
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.82	0.82	0.82	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.5	0.0	16.1	9.5	0.0	0.0	25.7	0.0	33.2	29.6	0.0	32.9
Incr Delay (d2), s/veh	0.1	0.0	1.8	0.3	4.5	0.2	0.5	0.0	17.7	0.6	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	0.0	8.5	2.4	1.9	0.1	3.7	0.0	10.9	1.4	0.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.6	0.0	17.8	9.8	4.5	0.2	26.2	0.0	50.8	30.2	0.0	33.7
LnGrp LOS	B	A	B	A	A	A	C	A	D	C	A	C
Approach Vol, veh/h		412			854			386			128	
Approach Delay, s/veh		17.2			5.3			43.0			32.5	
Approach LOS		B			A			D			C	

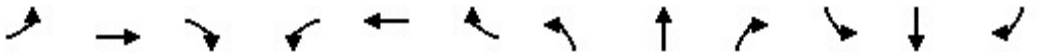
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	43.7	11.8	16.5	8.3	48.4	7.7	20.6
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 6.7	31.6	* 7.8	15.6	* 6.7	31.6	* 7.8	15.6
Max Q Clear Time (g_c+I1), s	6.8	13.8	7.0	5.7	3.1	2.0	3.8	15.1
Green Ext Time (p_c), s	0.0	3.4	0.0	0.1	0.0	8.7	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	18.2
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	449	91	46	588	0	0	0	0	163	0	149
Future Volume (veh/h)	0	449	91	46	588	0	0	0	0	163	0	149
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1744	1758	1772	1758	0				1832	1950	1832
Adj Flow Rate, veh/h	0	510	0	52	668	0				185	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	4	3	2	3	0				3	0	3
Cap, veh/h	0	1106		590	1308	0				246	0	
Arrive On Green	0.00	0.63	0.00	0.01	0.25	0.00				0.13	0.00	0.00
Sat Flow, veh/h	0	1744	1490	1688	1758	0				1857	0	0
Grp Volume(v), veh/h	0	510	0	52	668	0				185	0	0
Grp Sat Flow(s),veh/h/ln	0	1744	1490	1688	1758	0				1857	0	0
Q Serve(g_s), s	0.0	12.9	0.0	0.8	27.9	0.0				8.2	0.0	0.0
Cycle Q Clear(g_c), s	0.0	12.9	0.0	0.8	27.9	0.0				8.2	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1106		590	1308	0				246	0	
V/C Ratio(X)	0.00	0.46		0.09	0.51	0.00				0.75	0.00	
Avail Cap(c_a), veh/h	0	1106		663	1308	0				349	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.88	0.00	0.77	0.77	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.0	0.0	5.4	18.7	0.0				35.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.2	0.0	0.0	1.1	0.0				5.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	7.4	0.0	0.4	18.4	0.0				7.2	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	9.3	0.0	5.4	19.8	0.0				41.0	0.0	6.0
LnGrp LOS	A	A		A	B	A				D	A	A
Approach Vol, veh/h		510	A		720						354	A
Approach Delay, s/veh		9.3			18.8						24.3	
Approach LOS		A			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.3	59.4		16.3		68.7
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	6.5	44.5		15.0		57.5
Max Q Clear Time (g_c+I1), s	2.8	14.9		10.2		29.9
Green Ext Time (p_c), s	0.0	0.3		0.2		0.4

Intersection Summary	
HCM 6th Ctrl Delay	17.0
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	431	184	0	0	450	267	156	1	108	0	0	0
Future Volume (veh/h)	431	184	0	0	450	267	156	1	108	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1744	1716	0	0	1758	1800	1724	1911	1823			
Adj Flow Rate, veh/h	474	202	0	0	495	0	171	1	0			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	4	6	0	0	3	0	8	0	1			
Cap, veh/h	669	1296	0	0	929		230	1				
Arrive On Green	0.28	1.00	0.00	0.00	0.53	0.00	0.13	0.13	0.00			
Sat Flow, veh/h	1661	1716	0	0	1758	1525	1810	11	0			
Grp Volume(v), veh/h	474	202	0	0	495	0	172	0	0			
Grp Sat Flow(s),veh/h/ln	1661	1716	0	0	1758	1525	1820	0	0			
Q Serve(g_s), s	11.2	0.0	0.0	0.0	15.7	0.0	7.7	0.0	0.0			
Cycle Q Clear(g_c), s	11.2	0.0	0.0	0.0	15.7	0.0	7.7	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		0.00			
Lane Grp Cap(c), veh/h	669	1296	0	0	929		231	0				
V/C Ratio(X)	0.71	0.16	0.00	0.00	0.53		0.74	0.00				
Avail Cap(c_a), veh/h	683	1296	0	0	929		343	0				
HCM Platoon Ratio	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.87	0.87	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	7.2	0.0	0.0	0.0	13.1	0.0	35.8	0.0	0.0			
Incr Delay (d2), s/veh	2.4	0.2	0.0	0.0	2.2	0.0	4.8	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	4.0	0.1	0.0	0.0	9.9	0.0	6.6	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	9.6	0.2	0.0	0.0	15.3	0.0	40.5	0.0	6.0			
LnGrp LOS	A	A	A	A	B		D	A	A			
Approach Vol, veh/h		676			495	A		291	A			
Approach Delay, s/veh		6.8			15.3			26.4				
Approach LOS		A			B			C				

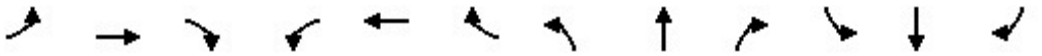
Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		69.2		15.8	19.3	49.9						
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0						
Max Green Setting (Gmax), s		58.0		15.0	14.0	38.0						
Max Q Clear Time (g_c+I1), s		2.0		9.7	13.2	17.7						
Green Ext Time (p_c), s		0.6		0.2	0.0	0.2						

Intersection Summary												
HCM 6th Ctrl Delay			13.6									
HCM 6th LOS			B									

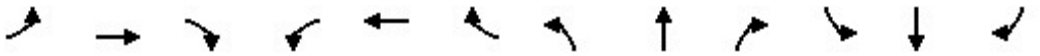
Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

2022 Opening Year No Build Scenario
AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	268	51	153	524	74	105	75	240	38	38	52
Future Volume (vph)	37	268	51	153	524	74	105	75	240	38	38	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		0	200		185	175		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	50			75			100			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.976				0.850		0.886			0.913	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1591	1647	0	1604	1713	1456	1542	1603	0	1645	1633	0
Flt Permitted	0.245			0.396			0.616			0.333		
Satd. Flow (perm)	410	1647	0	669	1713	1456	1000	1603	0	577	1633	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15				190		170			62	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			569			553			571	
Travel Time (s)		14.1			9.7			15.1			11.1	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	6%	5%	6%	1%	3%	3%	4%	0%	0%	0%	0%	6%
Adj. Flow (vph)	44	319	61	182	624	88	125	89	286	45	45	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	380	0	182	624	88	125	375	0	45	107	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	34	34		34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40		40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0		3.0	10.0	10.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	10.6	39.6		9.6	16.6	16.6	10.5	9.5		9.5	9.5	
Total Split (s)	13.3	38.2		13.3	38.2	38.2	12.2	16.3		12.2	16.3	
Total Split (%)	16.6%	47.8%		16.6%	47.8%	47.8%	15.3%	20.4%		15.3%	20.4%	
Maximum Green (s)	7.0	31.8		7.0	31.8	31.8	7.0	10.9		7.0	10.9	
Yellow Time (s)	3.0	4.4		3.0	4.4	4.4	3.0	3.0		3.0	3.0	
All-Red Time (s)	3.3	2.0		3.3	2.0	2.0	2.2	2.4		2.2	2.4	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	5.3	5.4		5.3	5.4	5.4	4.2	4.4		4.2	4.4	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0		3.0	6.0	6.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0		0.0	25.0	25.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0		0.0	13.0	13.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		26.0			26.0	26.0		17.0			17.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	43.8	36.3		46.5	41.6	41.6	18.4	13.4		17.4	10.9	
Actuated g/C Ratio	0.55	0.45		0.58	0.52	0.52	0.23	0.17		0.22	0.14	
v/c Ratio	0.13	0.50		0.38	0.70	0.10	0.44	0.92		0.20	0.39	
Control Delay	8.4	18.9		5.2	15.2	0.3	27.9	48.7		22.7	19.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	8.4	18.9		5.2	15.2	0.3	27.9	48.7		22.7	19.7	
LOS	A	B		A	B	A	C	D		C	B	
Approach Delay		17.8			11.7			43.5			20.6	
Approach LOS		B			B			D			C	
Queue Length 50th (ft)	7	108		14	219	0	38	85		13	16	
Queue Length 95th (ft)	16	159		19	#337	m0	67	#195		29	46	
Internal Link Dist (ft)		747			489			473			491	
Turn Bay Length (ft)	175			200		185	175			150		
Base Capacity (vph)	345	756		482	891	849	283	409		233	295	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.13	0.50		0.38	0.70	0.10	0.44	0.92		0.19	0.36	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 21.8		Intersection LOS: C	
Intersection Capacity Utilization 71.6%		ICU Level of Service C	
Analysis Period (min) 15			

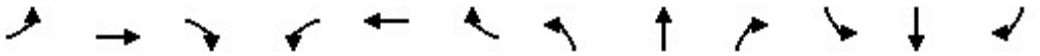
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	456	92	47	597	0	0	0	0	165	0	151
Future Volume (vph)	0	456	92	47	597	0	0	0	0	165	0	151
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	100		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.935	
Flt Protected				0.950							0.975	
Satd. Flow (prot)	0	1731	1485	1621	1748	0	0	0	0	0	1716	0
Flt Permitted				0.322							0.975	
Satd. Flow (perm)	0	1731	1485	549	1748	0	0	0	0	0	1716	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			130								136	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		569			608			453			537	
Travel Time (s)		9.7			10.4			10.3			12.2	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	4%	3%	2%	3%	0%	0%	0%	0%	3%	0%	3%
Adj. Flow (vph)	0	518	105	53	678	0	0	0	0	188	0	172
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	518	105	53	678	0	0	0	0	0	360	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												

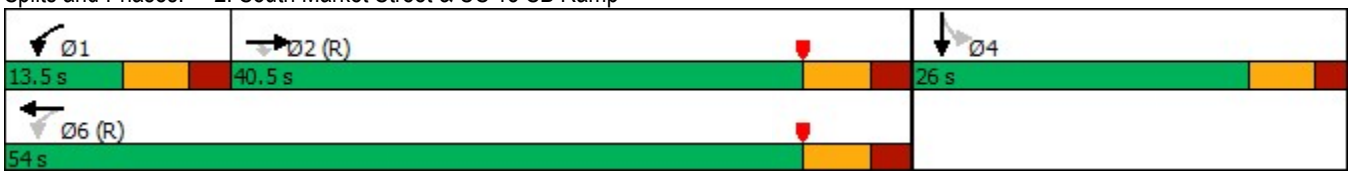


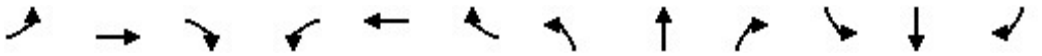
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		40.5	40.5	13.5	54.0					26.0	26.0	
Total Split (%)		50.6%	50.6%	16.9%	67.5%					32.5%	32.5%	
Maximum Green (s)		34.0	34.0	7.0	47.5					20.0	20.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		44.9	44.9	52.9	52.9						16.6	
Actuated g/C Ratio		0.56	0.56	0.66	0.66						0.21	
v/c Ratio		0.53	0.12	0.11	0.59						0.78	
Control Delay		12.2	1.9	3.3	8.5						29.8	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		12.2	1.9	3.3	8.5						29.8	
LOS		B	A	A	A						C	
Approach Delay		10.4			8.1						29.8	
Approach LOS		B			A						C	
Queue Length 50th (ft)		115	3	3	181						83	
Queue Length 95th (ft)		m143	m7	m7	m225						146	
Internal Link Dist (ft)		489			528			373			457	
Turn Bay Length (ft)			125	100								
Base Capacity (vph)		971	889	470	1155						550	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.53	0.12	0.11	0.59						0.65	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 13.5		Intersection LOS: B	
Intersection Capacity Utilization 79.8%		ICU Level of Service D	
Analysis Period (min) 15			

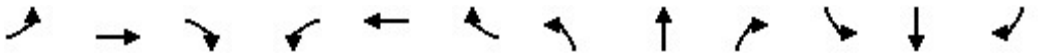
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US 15 SB Ramp





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	437	187	0	0	457	271	158	1	110	0	0	0
Future Volume (vph)	437	187	0	0	457	271	158	1	110	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.945				
Flt Protected	0.950							0.971				
Satd. Flow (prot)	1644	1642	0	0	1748	1479	0	1684	0	0	0	0
Flt Permitted	0.248							0.971				
Satd. Flow (perm)	429	1642	0	0	1748	1479	0	1684	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						298		38				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	4%	6%	0%	0%	3%	0%	8%	0%	1%	0%	0%	0%
Adj. Flow (vph)	480	205	0	0	502	298	174	1	121	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	480	205	0	0	502	298	0	296	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												

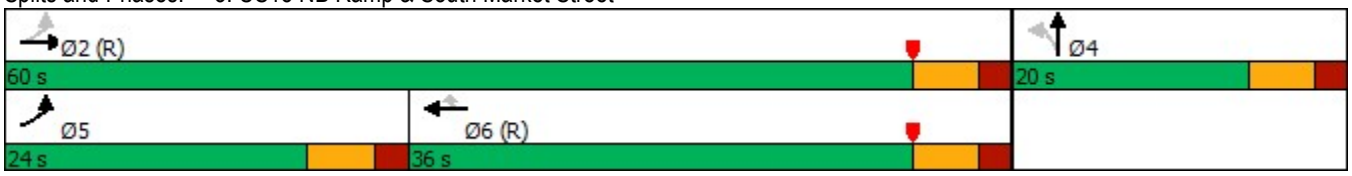


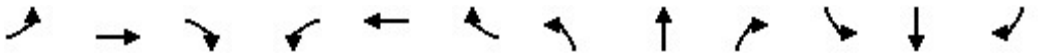
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	24.0	60.0			36.0	36.0	20.0	20.0				
Total Split (%)	30.0%	75.0%			45.0%	45.0%	25.0%	25.0%				
Maximum Green (s)	18.0	54.0			30.0	30.0	14.0	14.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	55.3	55.3			32.8	32.8		14.7				
Actuated g/C Ratio	0.69	0.69			0.41	0.41		0.18				
v/c Ratio	0.85	0.18			0.70	0.38		0.87				
Control Delay	26.6	2.1			26.8	3.8		54.4				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	26.6	2.1			26.8	3.8		54.4				
LOS	C	A			C	A		D				
Approach Delay		19.3			18.2			54.4				
Approach LOS		B			B			D				
Queue Length 50th (ft)	175	15			168	0		101				
Queue Length 95th (ft)	#288	m13			262	37		#211				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	585	1134			715	781		346				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.82	0.18			0.70	0.38		0.86				

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 40 (50%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 24.7		Intersection LOS: C	
Intersection Capacity Utilization 79.8%		ICU Level of Service D	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: US15 NB Ramp & South Market Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	268	51	153	524	74	105	75	240	38	38	52
Future Volume (veh/h)	37	268	51	153	524	74	105	75	240	38	38	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1864	1878	1864	1697	1669	1669	1780	1837	1837	1794	1866	1710
Adj Flow Rate, veh/h	44	319	49	182	624	69	125	89	197	45	45	41
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	6	5	6	1	3	3	4	0	0	0	0	6
Cap, veh/h	530	756	116	571	886	751	316	76	167	164	88	80
Arrive On Green	0.04	0.48	0.48	0.18	1.00	1.00	0.09	0.15	0.15	0.04	0.10	0.10
Sat Flow, veh/h	1775	1590	244	1616	1669	1414	1696	509	1126	1709	899	819
Grp Volume(v), veh/h	44	0	368	182	624	69	125	0	286	45	0	86
Grp Sat Flow(s),veh/h/ln	1775	0	1834	1616	1669	1414	1696	0	1635	1709	0	1719
Q Serve(g_s), s	1.0	0.0	10.5	4.4	0.0	0.0	5.0	0.0	11.9	1.9	0.0	3.8
Cycle Q Clear(g_c), s	1.0	0.0	10.5	4.4	0.0	0.0	5.0	0.0	11.9	1.9	0.0	3.8
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.69	1.00		0.48
Lane Grp Cap(c), veh/h	530	0	872	571	886	751	316	0	243	164	0	167
V/C Ratio(X)	0.08	0.00	0.42	0.32	0.70	0.09	0.40	0.00	1.18	0.27	0.00	0.51
Avail Cap(c_a), veh/h	643	0	872	586	886	751	325	0	243	261	0	256
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.78	0.78	0.78	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.8	0.0	13.8	8.1	0.0	0.0	26.8	0.0	34.1	30.7	0.0	34.3
Incr Delay (d2), s/veh	0.1	0.0	1.5	0.2	3.7	0.2	0.8	0.0	113.8	0.9	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.0	7.5	2.0	1.6	0.1	3.7	0.0	19.4	1.4	0.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.9	0.0	15.3	8.3	3.7	0.2	27.6	0.0	147.8	31.6	0.0	36.7
LnGrp LOS	A	A	B	A	A	A	C	A	F	C	A	D
Approach Vol, veh/h		412			875			411			131	
Approach Delay, s/veh		14.7			4.4			111.2			35.0	
Approach LOS		B			A			F			C	

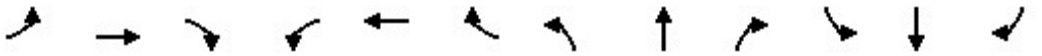
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.6	43.4	11.8	12.2	8.2	47.9	7.7	16.3
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 7	31.8	* 7	10.9	* 7	31.8	* 7	10.9
Max Q Clear Time (g_c+I1), s	6.4	12.5	7.0	5.8	3.0	2.0	3.9	13.9
Green Ext Time (p_c), s	0.0	3.5	0.0	0.1	0.0	9.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	32.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



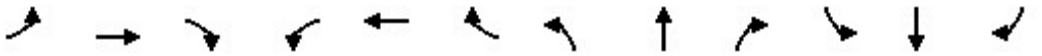
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	456	92	47	597	0	0	0	0	165	0	151
Future Volume (veh/h)	0	456	92	47	597	0	0	0	0	165	0	151
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1744	1758	1772	1758	0				1832	1950	1832
Adj Flow Rate, veh/h	0	518	0	53	678	0				188	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	4	3	2	3	0				3	0	3
Cap, veh/h	0	1072		569	1285	0				256	0	
Arrive On Green	0.00	0.61	0.00	0.06	0.97	0.00				0.14	0.00	0.00
Sat Flow, veh/h	0	1744	1490	1688	1758	0				1857	0	0
Grp Volume(v), veh/h	0	518	0	53	678	0				188	0	0
Grp Sat Flow(s),veh/h/ln	0	1744	1490	1688	1758	0				1857	0	0
Q Serve(g_s), s	0.0	13.0	0.0	0.8	1.8	0.0				7.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	13.0	0.0	0.8	1.8	0.0				7.8	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1072		569	1285	0				256	0	
V/C Ratio(X)	0.00	0.48		0.09	0.53	0.00				0.73	0.00	
Avail Cap(c_a), veh/h	0	1072		658	1285	0				487	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.88	0.00	0.65	0.65	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.4	0.0	5.5	0.3	0.0				33.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.4	0.0	0.0	1.0	0.0				4.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	7.4	0.0	0.4	1.0	0.0				6.6	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	9.8	0.0	5.5	1.3	0.0				37.1	0.0	6.0
LnGrp LOS	A	A		A	A	A				D	A	A
Approach Vol, veh/h		518	A		731						360	A
Approach Delay, s/veh		9.8			1.6						22.3	
Approach LOS		A			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.3	54.7		16.0		64.0
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	34.0		20.0		47.5
Max Q Clear Time (g_c+I1), s	2.8	15.0		9.8		3.8
Green Ext Time (p_c), s	0.0	0.3		0.4		0.4

Intersection Summary	
HCM 6th Ctrl Delay	8.9
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	437	187	0	0	457	271	158	1	110	0	0	0
Future Volume (veh/h)	437	187	0	0	457	271	158	1	110	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1744	1716	0	0	1758	1800	1724	1911	1823			
Adj Flow Rate, veh/h	480	205	0	0	502	0	174	1	0			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	4	6	0	0	3	0	8	0	1			
Cap, veh/h	647	1278	0	0	924		236	1				
Arrive On Green	0.05	0.25	0.00	0.00	0.53	0.00	0.13	0.13	0.00			
Sat Flow, veh/h	1661	1716	0	0	1758	1525	1810	10	0			
Grp Volume(v), veh/h	480	205	0	0	502	0	175	0	0			
Grp Sat Flow(s),veh/h/ln	1661	1716	0	0	1758	1525	1820	0	0			
Q Serve(g_s), s	8.4	7.5	0.0	0.0	15.2	0.0	7.4	0.0	0.0			
Cycle Q Clear(g_c), s	8.4	7.5	0.0	0.0	15.2	0.0	7.4	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		0.00			
Lane Grp Cap(c), veh/h	647	1278	0	0	924		237	0				
V/C Ratio(X)	0.74	0.16	0.00	0.00	0.54		0.74	0.00				
Avail Cap(c_a), veh/h	781	1278	0	0	924		341	0				
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.83	0.83	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	10.6	10.5	0.0	0.0	12.6	0.0	33.5	0.0	0.0			
Incr Delay (d2), s/veh	2.6	0.2	0.0	0.0	2.3	0.0	4.9	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	5.3	4.1	0.0	0.0	9.5	0.0	6.3	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	13.2	10.8	0.0	0.0	14.9	0.0	38.3	0.0	6.0			
LnGrp LOS	B	B	A	A	B		D	A	A			
Approach Vol, veh/h		685			502	A		296	A			
Approach Delay, s/veh		12.4			14.9			25.1				
Approach LOS		B			B			C				

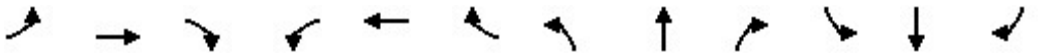
Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	64.6	15.4	17.5	47.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	54.0	14.0	18.0	30.0
Max Q Clear Time (g_c+I1), s	9.5	9.4	10.4	17.2
Green Ext Time (p_c), s	0.1	0.2	1.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay	15.8
HCM 6th LOS	B

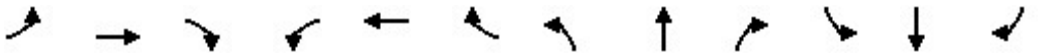
Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

2022 Opening Year No Build Scenario With Adjacent Development AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	274	52	153	555	74	112	75	240	38	38	55
Future Volume (vph)	38	274	52	153	555	74	112	75	240	38	38	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		225	200		185	175		0	150		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	50			75			100			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.886			0.911	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1591	1690	1423	1604	1713	1456	1542	1603	0	1645	1628	0
Flt Permitted	0.190			0.489			0.445			0.377		
Satd. Flow (perm)	318	1690	1423	826	1713	1456	722	1603	0	653	1628	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			101			101		155			65	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			569			553			571	
Travel Time (s)		14.1			9.7			15.1			11.1	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	6%	5%	6%	1%	3%	3%	4%	0%	0%	0%	0%	6%
Adj. Flow (vph)	45	326	62	182	661	88	133	89	286	45	45	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	326	62	182	661	88	133	375	0	45	110	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	34	34	34	34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6	-6	-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6	-6	-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40	40	40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	3	1	6	7	3	8		7	4	
Switch Phase												

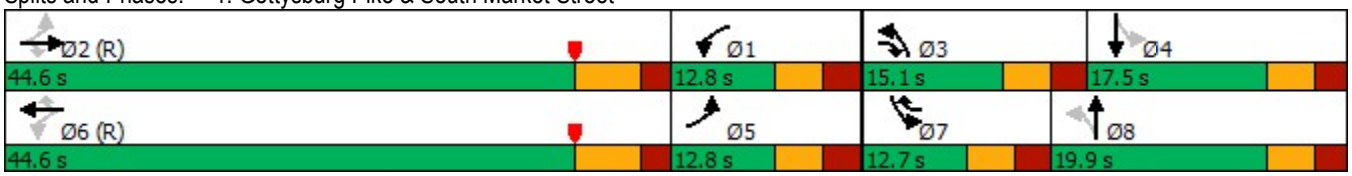


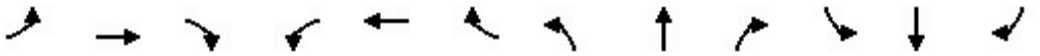
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0	3.0	3.0	10.0	3.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	10.7	39.6	10.5	9.6	16.6	9.5	10.5	9.5		9.5	9.5	
Total Split (s)	12.8	44.6	15.1	12.8	44.6	12.7	15.1	19.9		12.7	17.5	
Total Split (%)	14.2%	49.6%	16.8%	14.2%	49.6%	14.1%	16.8%	22.1%		14.1%	19.4%	
Maximum Green (s)	7.0	38.2	9.4	7.0	38.2	7.0	9.4	14.4		7.0	12.0	
Yellow Time (s)	3.2	4.4	3.2	3.2	4.4	3.2	3.2	3.2		3.2	3.2	
All-Red Time (s)	2.6	2.0	2.5	2.6	2.0	2.5	2.5	2.3		2.5	2.3	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.8	5.4	4.7	4.8	5.4	4.7	4.7	4.5		4.7	4.5	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0	3.0	3.0	6.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0	0.0	0.0	13.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max	None	None	C-Max	None	None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			22.0			22.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	50.6	42.9	55.8	52.5	47.5	57.7	23.4	15.3		17.8	11.6	
Actuated g/C Ratio	0.56	0.48	0.62	0.58	0.53	0.64	0.26	0.17		0.20	0.13	
v/c Ratio	0.16	0.40	0.07	0.34	0.73	0.09	0.46	0.94		0.21	0.41	
Control Delay	11.5	18.4	0.5	7.0	18.3	0.4	29.9	55.2		25.0	21.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	11.5	18.4	0.5	7.0	18.3	0.4	29.9	55.2		25.0	21.6	
LOS	B	B	A	A	B	A	C	E		C	C	
Approach Delay		15.1			14.4			48.6			22.6	
Approach LOS		B			B			D			C	
Queue Length 50th (ft)	8	99	0	21	271	0	45	103		14	18	
Queue Length 95th (ft)	18	143	2	25	#385	m0	77	#208		32	51	
Internal Link Dist (ft)		747			489			473			491	
Turn Bay Length (ft)	175		225	200		185	175			150		
Base Capacity (vph)	295	806	920	559	903	975	290	402		220	290	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.15	0.40	0.07	0.33	0.73	0.09	0.46	0.93		0.20	0.38	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 52 (58%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 23.8		Intersection LOS: C	
Intersection Capacity Utilization 73.4%		ICU Level of Service D	
Analysis Period (min) 15			

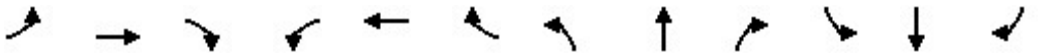
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	461	93	47	621	0	0	0	0	165	0	158
Future Volume (vph)	0	461	93	47	621	0	0	0	0	165	0	158
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	100		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.934	
Flt Protected				0.950							0.975	
Satd. Flow (prot)	0	1731	1485	1621	1748	0	0	0	0	0	1714	0
Flt Permitted				0.374							0.975	
Satd. Flow (perm)	0	1731	1485	638	1748	0	0	0	0	0	1714	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			115								121	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		569			608			453			537	
Travel Time (s)		9.7			10.4			10.3			12.2	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	4%	3%	2%	3%	0%	0%	0%	0%	3%	0%	3%
Adj. Flow (vph)	0	524	106	53	706	0	0	0	0	188	0	180
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	524	106	53	706	0	0	0	0	0	368	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												

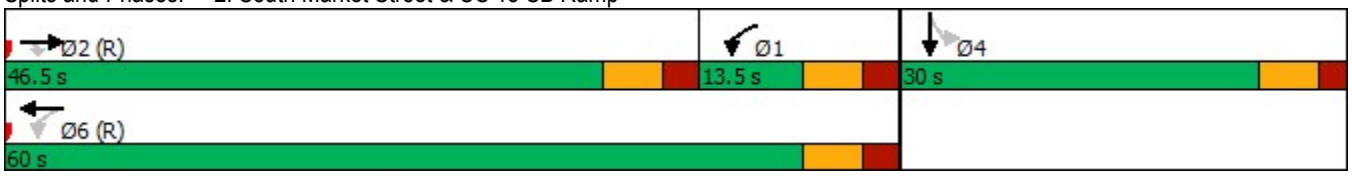


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		46.5	46.5	13.5	60.0					30.0	30.0	
Total Split (%)		51.7%	51.7%	15.0%	66.7%					33.3%	33.3%	
Maximum Green (s)		40.0	40.0	7.0	53.5					24.0	24.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lead	Lead	Lag								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		52.0	52.0	60.1	60.1						19.4	
Actuated g/C Ratio		0.58	0.58	0.67	0.67						0.22	
v/c Ratio		0.52	0.12	0.10	0.61						0.79	
Control Delay		8.3	0.4	3.1	7.5						34.5	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		8.3	0.4	3.1	7.5						34.5	
LOS		A	A	A	A						C	
Approach Delay		7.0			7.2						34.5	
Approach LOS		A			A						C	
Queue Length 50th (ft)		66	0	2	145						107	
Queue Length 95th (ft)		m104	m0	m6	m213						170	
Internal Link Dist (ft)		489			528			373			457	
Turn Bay Length (ft)			125	100								
Base Capacity (vph)		999	906	513	1166						563	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.52	0.12	0.10	0.61						0.65	

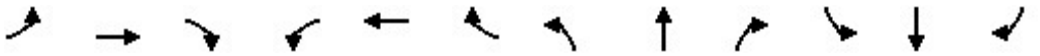
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 2 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 12.8		Intersection LOS: B	
Intersection Capacity Utilization 81.4%		ICU Level of Service D	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US 15 SB Ramp



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	441	188	0	0	474	271	165	1	110	0	0	0
Future Volume (vph)	441	188	0	0	474	271	165	1	110	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.946				
Flt Protected	0.950							0.971				
Satd. Flow (prot)	1644	1642	0	0	1748	1479	0	1685	0	0	0	0
Flt Permitted	0.239							0.971				
Satd. Flow (perm)	414	1642	0	0	1748	1479	0	1685	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						298		33				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	4%	6%	0%	0%	3%	0%	8%	0%	1%	0%	0%	0%
Adj. Flow (vph)	485	207	0	0	521	298	181	1	121	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	485	207	0	0	521	298	0	303	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												

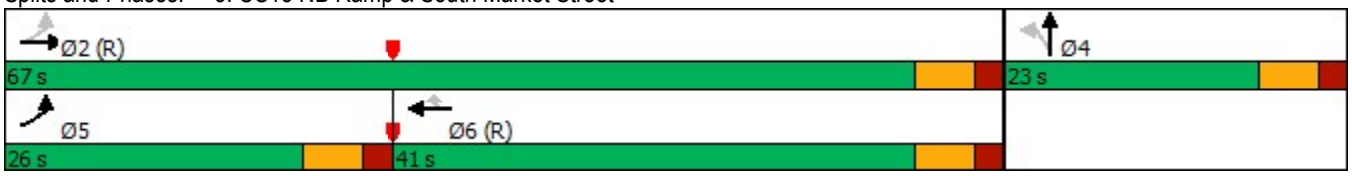


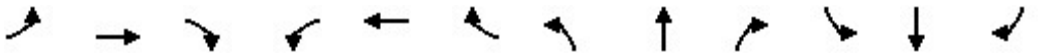
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	26.0	67.0			41.0	41.0	23.0	23.0				
Total Split (%)	28.9%	74.4%			45.6%	45.6%	25.6%	25.6%				
Maximum Green (s)	20.0	61.0			35.0	35.0	17.0	17.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	62.6	62.6			38.0	38.0		17.4				
Actuated g/C Ratio	0.70	0.70			0.42	0.42		0.19				
v/c Ratio	0.87	0.18			0.71	0.37		0.86				
Control Delay	41.4	3.6			28.6	3.7		55.7				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	41.4	3.6			28.6	3.7		55.7				
LOS	D	A			C	A		E				
Approach Delay		30.1			19.6			55.7				
Approach LOS		C			B			E				
Queue Length 50th (ft)	217	19			198	0		119				
Queue Length 95th (ft)	#315	m34			298	39		#232				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	575	1142			738	797		363				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.84	0.18			0.71	0.37		0.83				

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 70 (78%), Referenced to phase 2:EBTL and 6:WBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 29.6		Intersection LOS: C	
Intersection Capacity Utilization 81.4%		ICU Level of Service D	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: US15 NB Ramp & South Market Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	274	52	153	555	74	112	75	240	38	38	55
Future Volume (veh/h)	38	274	52	153	555	74	112	75	240	38	38	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1864	1878	1864	1697	1669	1669	1780	1837	1837	1794	1866	1710
Adj Flow Rate, veh/h	45	326	50	182	661	69	133	89	197	45	45	44
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	6	5	6	1	3	3	4	0	0	0	0	6
Cap, veh/h	467	818	839	606	727	675	333	87	193	151	101	99
Arrive On Green	0.14	0.44	0.44	0.27	0.87	0.87	0.10	0.17	0.17	0.04	0.12	0.12
Sat Flow, veh/h	1775	1878	1579	1616	1669	1414	1696	509	1126	1709	866	847
Grp Volume(v), veh/h	45	326	50	182	661	69	133	0	286	45	0	89
Grp Sat Flow(s),veh/h/ln	1775	1878	1579	1616	1669	1414	1696	0	1635	1709	0	1714
Q Serve(g_s), s	0.0	10.7	0.5	0.0	22.1	0.2	5.9	0.0	15.4	2.0	0.0	4.4
Cycle Q Clear(g_c), s	0.0	10.7	0.5	0.0	22.1	0.2	5.9	0.0	15.4	2.0	0.0	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.69	1.00		0.49
Lane Grp Cap(c), veh/h	467	818	839	606	727	675	333	0	280	151	0	200
V/C Ratio(X)	0.10	0.40	0.06	0.30	0.91	0.10	0.40	0.00	1.02	0.30	0.00	0.44
Avail Cap(c_a), veh/h	467	818	839	606	727	675	366	0	280	232	0	248
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.76	0.76	0.76	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.7	17.3	2.6	13.5	4.7	0.8	28.8	0.0	37.3	33.3	0.0	37.0
Incr Delay (d2), s/veh	0.1	1.5	0.1	0.2	14.1	0.2	0.8	0.0	59.7	1.1	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.2	8.1	0.5	3.5	7.7	0.2	4.4	0.0	16.3	1.6	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.8	18.8	2.7	13.7	18.8	1.0	29.6	0.0	97.0	34.4	0.0	38.6
LnGrp LOS	C	B	A	B	B	A	C	A	F	C	A	D
Approach Vol, veh/h		421			912			419			134	
Approach Delay, s/veh		17.2			16.4			75.6			37.2	
Approach LOS		B			B			E			D	

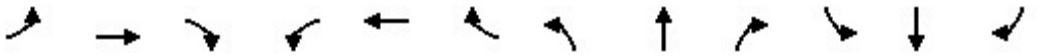
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.1	44.6	13.3	15.0	17.1	44.6	8.4	19.9
Change Period (Y+Rc), s	5.8	* 6.4	* 5.7	5.5	5.8	* 6.4	* 5.7	5.5
Max Green Setting (Gmax), s	7.0	* 38	* 9.4	12.0	7.0	* 38	* 7	14.4
Max Q Clear Time (g_c+I1), s	2.0	12.7	7.9	6.4	2.0	24.1	4.0	17.4
Green Ext Time (p_c), s	0.2	4.0	0.1	0.1	0.0	6.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	31.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



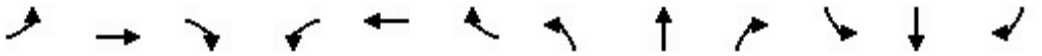
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	461	93	47	621	0	0	0	0	165	0	158
Future Volume (veh/h)	0	461	93	47	621	0	0	0	0	165	0	158
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1744	1758	1772	1758	0				1832	1950	1832
Adj Flow Rate, veh/h	0	524	0	53	706	0				188	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	4	3	2	3	0				3	0	3
Cap, veh/h	0	794		636	1315	0				251	0	
Arrive On Green	0.00	0.46	0.00	0.23	0.75	0.00				0.14	0.00	0.00
Sat Flow, veh/h	0	1744	1490	1688	1758	0				1857	0	0
Grp Volume(v), veh/h	0	524	0	53	706	0				188	0	0
Grp Sat Flow(s),veh/h/ln	0	1744	1490	1688	1758	0				1857	0	0
Q Serve(g_s), s	0.0	21.0	0.0	0.0	15.2	0.0				8.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	21.0	0.0	0.0	15.2	0.0				8.8	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	794		636	1315	0				251	0	
V/C Ratio(X)	0.00	0.66		0.08	0.54	0.00				0.75	0.00	
Avail Cap(c_a), veh/h	0	794		636	1315	0				516	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.93	0.00	0.64	0.64	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	19.1	0.0	16.1	4.8	0.0				37.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	4.0	0.0	0.0	1.0	0.0				4.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	13.2	0.0	1.1	6.4	0.0				7.6	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	23.0	0.0	16.2	5.8	0.0				41.9	0.0	6.0
LnGrp LOS	A	C		B	A	A				D	A	A
Approach Vol, veh/h		524	A		759						368	A
Approach Delay, s/veh		23.0			6.5						24.3	
Approach LOS		C			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	26.3	46.5		17.2		72.8
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	40.0		24.0		53.5
Max Q Clear Time (g_c+I1), s	2.0	23.0		10.8		17.2
Green Ext Time (p_c), s	0.0	0.3		0.5		0.4

Intersection Summary	
HCM 6th Ctrl Delay	15.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	441	188	0	0	474	271	165	1	110	0	0	0
Future Volume (veh/h)	441	188	0	0	474	271	165	1	110	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1744	1716	0	0	1758	1800	1724	1911	1823			
Adj Flow Rate, veh/h	485	207	0	0	521	0	181	1	0			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	4	6	0	0	3	0	8	0	1			
Cap, veh/h	642	1299	0	0	975		238	1				
Arrive On Green	0.05	0.25	0.00	0.00	0.55	0.00	0.13	0.13	0.00			
Sat Flow, veh/h	1661	1716	0	0	1758	1525	1810	10	0			
Grp Volume(v), veh/h	485	207	0	0	521	0	182	0	0			
Grp Sat Flow(s),veh/h/ln	1661	1716	0	0	1758	1525	1820	0	0			
Q Serve(g_s), s	9.0	8.5	0.0	0.0	16.9	0.0	8.7	0.0	0.0			
Cycle Q Clear(g_c), s	9.0	8.5	0.0	0.0	16.9	0.0	8.7	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		0.00			
Lane Grp Cap(c), veh/h	642	1299	0	0	975		240	0				
V/C Ratio(X)	0.76	0.16	0.00	0.00	0.53		0.76	0.00				
Avail Cap(c_a), veh/h	786	1299	0	0	975		364	0				
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.84	0.84	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	11.1	11.4	0.0	0.0	12.7	0.0	37.7	0.0	0.0			
Incr Delay (d2), s/veh	2.8	0.2	0.0	0.0	2.1	0.0	4.9	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	6.0	5.2	0.0	0.0	10.5	0.0	7.4	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	13.9	11.6	0.0	0.0	14.8	0.0	42.6	0.0	6.0			
LnGrp LOS	B	B	A	A	B		D	A	A			
Approach Vol, veh/h		692			521	A		303	A			
Approach Delay, s/veh		13.2			14.8			28.0				
Approach LOS		B			B			C				

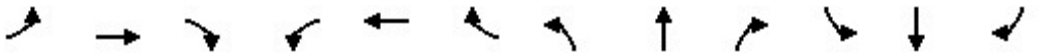
Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	73.1	16.9	18.2	54.9
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	61.0	17.0	20.0	35.0
Max Q Clear Time (g_c+I1), s	10.5	10.7	11.0	18.9
Green Ext Time (p_c), s	0.1	0.3	1.3	0.3

Intersection Summary	
HCM 6th Ctrl Delay	16.7
HCM 6th LOS	B

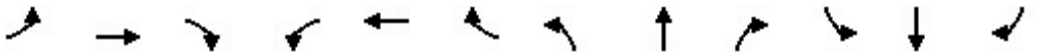
Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

2022 Opening Year Build Scenario
AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	117	190	75	212	413	74	142	97	287	147	50	172
Future Volume (vph)	117	190	75	212	413	74	142	97	287	147	50	172
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		0	200		185	175		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	50			75			100			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.958				0.850		0.888			0.884	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1653	1613	0	1604	1696	1456	1557	1606	0	1645	1611	0
Flt Permitted	0.268			0.462			0.355			0.202		
Satd. Flow (perm)	466	1613	0	780	1696	1456	582	1606	0	350	1611	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25				168		154			176	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			370			464			336	
Travel Time (s)		14.1			6.3			12.7			6.5	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	2%	6%	4%	1%	4%	3%	3%	0%	0%	0%	0%	2%
Adj. Flow (vph)	139	226	89	252	492	88	169	115	342	175	60	205
Shared Lane Traffic (%)												
Lane Group Flow (vph)	139	315	0	252	492	88	169	457	0	175	265	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	34	34		34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40		40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0		3.0	10.0	10.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	10.6	39.6		9.6	16.6	16.6	10.5	9.5		9.5	9.5	
Total Split (s)	13.3	39.5		13.3	39.5	39.5	12.7	25.0		12.2	24.3	
Total Split (%)	14.8%	43.9%		14.8%	43.9%	43.9%	14.1%	27.8%		13.6%	27.0%	
Maximum Green (s)	7.0	33.1		7.0	33.1	33.1	7.5	19.6		7.0	18.9	
Yellow Time (s)	3.0	4.4		3.0	4.4	4.4	3.0	3.0		3.0	3.0	
All-Red Time (s)	3.3	2.0		3.3	2.0	2.0	2.2	2.4		2.2	2.4	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	5.3	5.4		5.3	5.4	5.4	4.2	4.4		4.2	4.4	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0		3.0	6.0	6.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0		0.0	25.0	25.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0		0.0	13.0	13.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		26.0			26.0	26.0		17.0			17.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	42.4	34.4		42.6	34.5	34.5	29.0	20.3		28.0	19.8	
Actuated g/C Ratio	0.47	0.38		0.47	0.38	0.38	0.32	0.23		0.31	0.22	
v/c Ratio	0.43	0.50		0.57	0.76	0.13	0.61	0.95		0.78	0.54	
Control Delay	15.5	22.9		10.3	23.8	0.6	31.2	54.6		47.1	15.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	15.5	22.9		10.3	23.8	0.6	31.2	54.6		47.1	15.5	
LOS	B	C		B	C	A	C	D		D	B	
Approach Delay		20.6			17.2			48.2			28.1	
Approach LOS		C			B			D			C	
Queue Length 50th (ft)	31	99		26	188	0	54	142		55	34	
Queue Length 95th (ft)	52	147		39	226	m1	87	#255		#104	79	
Internal Link Dist (ft)		747			290			384			256	
Turn Bay Length (ft)	175			200		185	175			150		
Base Capacity (vph)	325	631		441	649	661	279	486		224	496	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.43	0.50		0.57	0.76	0.13	0.61	0.94		0.78	0.53	

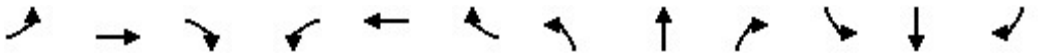
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 2 (2%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 28.2		Intersection LOS: C	
Intersection Capacity Utilization 78.5%		ICU Level of Service D	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

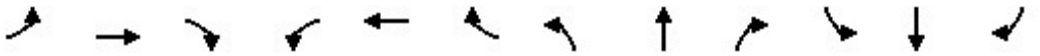
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	504	122	47	653	0	0	0	0	165	0	187
Future Volume (vph)	0	504	122	47	653	0	0	0	0	165	0	187
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	100		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.928	
Flt Protected				0.950							0.977	
Satd. Flow (prot)	0	1731	1485	1621	1748	0	0	0	0	0	1707	0
Flt Permitted				0.286							0.977	
Satd. Flow (perm)	0	1731	1485	488	1748	0	0	0	0	0	1707	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			129								121	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		199			608			453			537	
Travel Time (s)		3.4			10.4			10.3			12.2	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	4%	3%	2%	3%	0%	0%	0%	0%	3%	0%	3%
Adj. Flow (vph)	0	573	139	53	742	0	0	0	0	188	0	213
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	573	139	53	742	0	0	0	0	0	401	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												

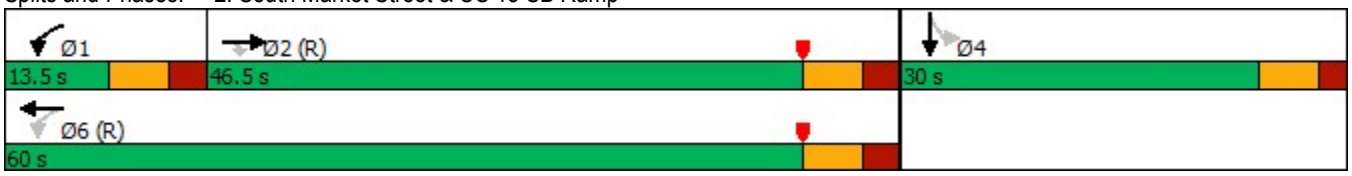


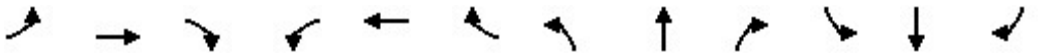
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		46.5	46.5	13.5	60.0					30.0	30.0	
Total Split (%)		51.7%	51.7%	15.0%	66.7%					33.3%	33.3%	
Maximum Green (s)		40.0	40.0	7.0	53.5					24.0	24.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		50.7	50.7	58.8	58.8						20.7	
Actuated g/C Ratio		0.56	0.56	0.65	0.65						0.23	
v/c Ratio		0.59	0.16	0.13	0.65						0.83	
Control Delay		16.8	4.3	2.6	7.7						37.0	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		16.8	4.3	2.6	7.7						37.0	
LOS		B	A	A	A						D	
Approach Delay		14.4			7.4						37.0	
Approach LOS		B			A						D	
Queue Length 50th (ft)		202	13	2	195						121	
Queue Length 95th (ft)		m244	m24	m5	m233						193	
Internal Link Dist (ft)		119			528			373			457	
Turn Bay Length (ft)			125	100								
Base Capacity (vph)		975	893	419	1141						561	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.59	0.16	0.13	0.65						0.71	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 16.2		Intersection LOS: B	
Intersection Capacity Utilization 84.8%		ICU Level of Service E	
Analysis Period (min) 15			

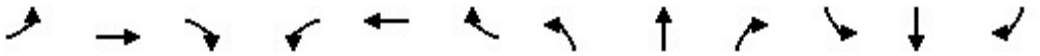
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US 15 SB Ramp





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	467	205	0	0	475	271	196	1	110	0	0	0
Future Volume (vph)	467	205	0	0	475	271	196	1	110	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.952				
Flt Protected	0.950							0.969				
Satd. Flow (prot)	1676	1642	0	0	1765	1479	0	1708	0	0	0	0
Flt Permitted	0.202							0.969				
Satd. Flow (perm)	356	1642	0	0	1765	1479	0	1708	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						298		28				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	6%	0%	0%	2%	0%	6%	0%	1%	0%	0%	0%
Adj. Flow (vph)	513	225	0	0	522	298	215	1	121	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	513	225	0	0	522	298	0	337	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												



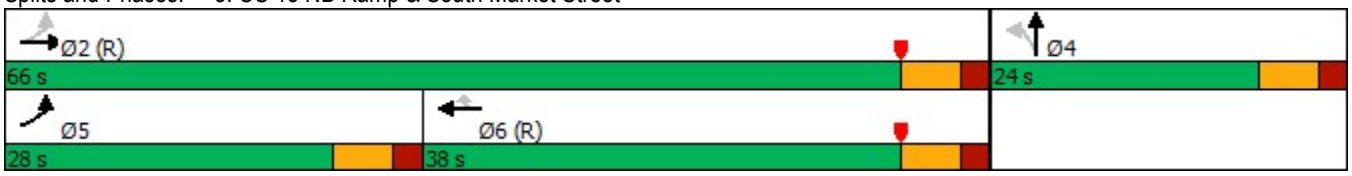
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	28.0	66.0			38.0	38.0	24.0	24.0				
Total Split (%)	31.1%	73.3%			42.2%	42.2%	26.7%	26.7%				
Maximum Green (s)	22.0	60.0			32.0	32.0	18.0	18.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	61.4	61.4			34.5	34.5		18.6				
Actuated g/C Ratio	0.68	0.68			0.38	0.38		0.21				
v/c Ratio	0.91	0.20			0.77	0.40		0.90				
Control Delay	39.8	3.0			34.4	4.2		60.2				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	39.8	3.0			34.4	4.2		60.2				
LOS	D	A			C	A		E				
Approach Delay		28.6			23.4			60.2				
Approach LOS		C			C			E				
Queue Length 50th (ft)	248	26			210	0		138				
Queue Length 95th (ft)	#359	m24			#345	41		#262				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	580	1119			677	751		382				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.88	0.20			0.77	0.40		0.88				

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 48 (53%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 32.0		Intersection LOS: C	
Intersection Capacity Utilization 84.8%		ICU Level of Service E	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

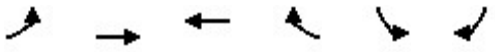
Splits and Phases: 3: US 15 NB Ramp & South Market Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	254	31	168	120	21	114
Future Volume (vph)	254	31	168	120	21	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		0%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.944			
Flt Protected	0.950					0.992
Satd. Flow (prot)	1770	1583	1758	0	0	1823
Flt Permitted	0.950					0.992
Satd. Flow (perm)	1770	1583	1758	0	0	1823
Link Speed (mph)	25		25			35
Link Distance (ft)	189		336			230
Travel Time (s)	5.2		9.2			4.5
Confl. Peds. (#/hr)					121	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	282	34	187	133	23	127
Shared Lane Traffic (%)						
Lane Group Flow (vph)	282	34	320	0	0	150
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.6%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	624	699	144	0	0
Future Volume (vph)	0	624	699	144	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	1900	1844	1552	0	0
Flt Permitted						
Satd. Flow (perm)	0	1900	1844	1552	0	0
Link Speed (mph)		30	40		25	
Link Distance (ft)		370	199		166	
Travel Time (s)		8.4	3.4		4.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	2%	0%	0%
Adj. Flow (vph)	0	693	777	160	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	693	777	160	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	40.1%	ICU Level of Service	A
Analysis Period (min)	15		



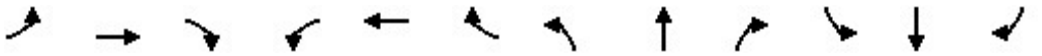
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	13	50	475	0	91	245
Future Volume (vph)	13	50	475	0	91	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-1%		-4%			4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950					0.987
Satd. Flow (prot)	1778	1591	1919	0	0	1802
Flt Permitted	0.950					0.987
Satd. Flow (perm)	1778	1591	1919	0	0	1802
Link Speed (mph)	25		25			25
Link Distance (ft)	240		376			464
Travel Time (s)	6.5		10.3			12.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	1%	2%	2%	2%
Adj. Flow (vph)	14	56	528	0	101	272
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	56	528	0	0	373
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.97	0.97	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	49	426	23	0	258
Future Volume (vph)	0	49	426	23	0	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%		1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865	0.993			
Flt Protected						
Satd. Flow (prot)	0	1603	1858	0	0	1872
Flt Permitted						
Satd. Flow (perm)	0	1603	1858	0	0	1872
Link Speed (mph)	25		25			25
Link Distance (ft)	254		129			376
Travel Time (s)	6.9		3.5			10.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	2%	1%	2%	0%	1%
Adj. Flow (vph)	0	54	473	26	0	287
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	54	499	0	0	287
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.8%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	190	75	212	413	74	142	97	287	147	50	172
Future Volume (veh/h)	117	190	75	212	413	74	142	97	287	147	50	172
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1921	1864	1892	1697	1655	1669	1795	1837	1837	1794	1866	1766
Adj Flow Rate, veh/h	139	226	74	252	492	20	169	115	286	175	60	188
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	6	4	1	4	3	3	0	0	0	0	2
Cap, veh/h	342	509	167	472	648	553	334	107	266	232	89	278
Arrive On Green	0.08	0.38	0.38	0.09	0.39	0.39	0.09	0.23	0.23	0.09	0.22	0.22
Sat Flow, veh/h	1829	1344	440	1616	1655	1414	1709	467	1161	1709	397	1245
Grp Volume(v), veh/h	139	0	300	252	492	20	169	0	401	175	0	248
Grp Sat Flow(s),veh/h/ln	1829	0	1784	1616	1655	1414	1709	0	1628	1709	0	1642
Q Serve(g_s), s	4.0	0.0	11.3	8.0	23.2	0.8	6.7	0.0	20.6	7.1	0.0	12.4
Cycle Q Clear(g_c), s	4.0	0.0	11.3	8.0	23.2	0.8	6.7	0.0	20.6	7.1	0.0	12.4
Prop In Lane	1.00		0.25	1.00		1.00	1.00		0.71	1.00		0.76
Lane Grp Cap(c), veh/h	342	0	676	472	648	553	334	0	373	232	0	367
V/C Ratio(X)	0.41	0.00	0.44	0.53	0.76	0.04	0.51	0.00	1.08	0.75	0.00	0.68
Avail Cap(c_a), veh/h	365	0	676	472	648	553	334	0	373	232	0	367
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.6	0.0	20.9	16.9	23.7	16.9	24.3	0.0	34.7	26.0	0.0	32.0
Incr Delay (d2), s/veh	0.8	0.0	2.1	1.2	8.2	0.1	1.2	0.0	68.4	13.1	0.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.9	0.0	8.4	5.6	14.9	0.5	5.0	0.0	22.4	6.4	0.0	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.4	0.0	23.0	18.0	31.9	17.0	25.5	0.0	103.1	39.1	0.0	36.9
LnGrp LOS	B	A	C	B	C	B	C	A	F	D	A	D
Approach Vol, veh/h		439			764			570			423	
Approach Delay, s/veh		21.5			26.9			80.1			37.8	
Approach LOS		C			C			F			D	

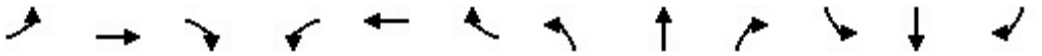
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	39.5	12.7	24.5	12.2	40.6	12.2	25.0
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 7	33.1	* 7.5	18.9	* 7	33.1	* 7	19.6
Max Q Clear Time (g_c+I1), s	10.0	13.3	8.7	14.4	6.0	25.2	9.1	22.6
Green Ext Time (p_c), s	0.0	2.8	0.0	0.3	0.0	3.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	41.7
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



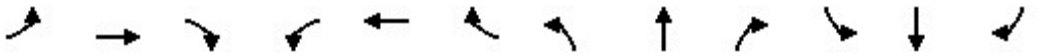
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	504	122	47	653	0	0	0	0	165	0	187
Future Volume (veh/h)	0	504	122	47	653	0	0	0	0	165	0	187
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1744	1758	1772	1758	0				1832	1950	1832
Adj Flow Rate, veh/h	0	573	0	53	742	0				188	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	4	3	2	3	0				3	0	3
Cap, veh/h	0	1122		527	1315	0				251	0	
Arrive On Green	0.00	0.64	0.00	0.04	0.75	0.00				0.14	0.00	0.00
Sat Flow, veh/h	0	1744	1490	1688	1758	0				1857	0	0
Grp Volume(v), veh/h	0	573	0	53	742	0				188	0	0
Grp Sat Flow(s),veh/h/ln	0	1744	1490	1688	1758	0				1857	0	0
Q Serve(g_s), s	0.0	15.7	0.0	0.8	16.6	0.0				8.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	15.7	0.0	0.8	16.6	0.0				8.8	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1122		527	1315	0				251	0	
V/C Ratio(X)	0.00	0.51		0.10	0.56	0.00				0.75	0.00	
Avail Cap(c_a), veh/h	0	1122		603	1315	0				516	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.55	0.55	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.5	0.0	5.8	4.9	0.0				37.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.7	0.0	0.0	1.0	0.0				4.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	9.0	0.0	0.4	6.6	0.0				7.6	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	10.2	0.0	5.8	5.9	0.0				41.9	0.0	6.0
LnGrp LOS	A	B		A	A	A				D	A	A
Approach Vol, veh/h		573	A		795						400	A
Approach Delay, s/veh		10.2			5.9						22.9	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.4	63.4		17.2		72.8
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	40.0		24.0		53.5
Max Q Clear Time (g_c+I1), s	2.8	17.7		10.8		18.6
Green Ext Time (p_c), s	0.0	0.3		0.5		0.4

Intersection Summary	
HCM 6th Ctrl Delay	11.1
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	467	205	0	0	475	271	196	1	110	0	0	0
Future Volume (veh/h)	467	205	0	0	475	271	196	1	110	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1772	1716	0	0	1772	1800	1752	1911	1823			
Adj Flow Rate, veh/h	513	225	0	0	522	0	215	1	0			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	6	0	0	2	0	6	0	1			
Cap, veh/h	620	1266	0	0	923		273	1				
Arrive On Green	0.05	0.24	0.00	0.00	0.52	0.00	0.15	0.15	0.00			
Sat Flow, veh/h	1688	1716	0	0	1772	1525	1812	8	0			
Grp Volume(v), veh/h	513	225	0	0	522	0	216	0	0			
Grp Sat Flow(s),veh/h/ln	1688	1716	0	0	1772	1525	1820	0	0			
Q Serve(g_s), s	10.1	9.3	0.0	0.0	18.0	0.0	10.3	0.0	0.0			
Cycle Q Clear(g_c), s	10.1	9.3	0.0	0.0	18.0	0.0	10.3	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	620	1266	0	0	923		274	0				
V/C Ratio(X)	0.83	0.18	0.00	0.00	0.57		0.79	0.00				
Avail Cap(c_a), veh/h	779	1266	0	0	923		384	0				
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.78	0.78	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	13.6	12.4	0.0	0.0	14.6	0.0	36.8	0.0	0.0			
Incr Delay (d2), s/veh	4.7	0.2	0.0	0.0	2.5	0.0	7.1	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	8.3	6.1	0.0	0.0	11.4	0.0	8.7	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	18.3	12.7	0.0	0.0	17.2	0.0	43.9	0.0	6.0			
LnGrp LOS	B	B	A	A	B		D	A	A			
Approach Vol, veh/h		738			522	A		337	A			
Approach Delay, s/veh		16.6			17.2			30.3				
Approach LOS		B			B			C				

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		71.4		18.6	19.6	51.9						
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0						
Max Green Setting (Gmax), s		60.0		18.0	22.0	32.0						
Max Q Clear Time (g_c+I1), s		11.3		12.3	12.1	20.0						
Green Ext Time (p_c), s		0.1		0.3	1.4	0.2						

Intersection Summary												
HCM 6th Ctrl Delay			19.7									
HCM 6th LOS			B									

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	8.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	254	31	168	120	21	114
Future Vol, veh/h	254	31	168	120	21	114
Conflicting Peds, #/hr	0	0	0	0	121	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	282	34	187	133	23	127

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	548	375	0	0	441	0
Stage 1	375	-	-	-	-	-
Stage 2	173	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.3	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	563	711	-	-	847	-
Stage 1	717	-	-	-	-	-
Stage 2	993	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	490	639	-	-	762	-
Mov Cap-2 Maneuver	490	-	-	-	-	-
Stage 1	645	-	-	-	-	-
Stage 2	961	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.7	0	1.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	490	639	762	-
HCM Lane V/C Ratio	-	-	0.576	0.054	0.031	-
HCM Control Delay (s)	-	-	21.9	11	9.9	0
HCM Lane LOS	-	-	C	B	A	A
HCM 95th %tile Q(veh)	-	-	3.6	0.2	0.1	-

Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	50	475	0	91	245
Future Vol, veh/h	13	50	475	0	91	245
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-4	-	-	4
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	1	2	2	2
Mvmt Flow	14	56	528	0	101	272

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1002	528	0	0	528	0
Stage 1	528	-	-	-	-	-
Stage 2	474	-	-	-	-	-
Critical Hdwy	6.22	6.12	-	-	4.3	-
Critical Hdwy Stg 1	6.2	-	-	-	-	-
Critical Hdwy Stg 2	5.22	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	313	589	-	-	789	-
Stage 1	597	-	-	-	-	-
Stage 2	731	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	266	589	-	-	789	-
Mov Cap-2 Maneuver	266	-	-	-	-	-
Stage 1	597	-	-	-	-	-
Stage 2	621	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.3	0	2.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	266	589	789	-
HCM Lane V/C Ratio	-	-	0.054	0.094	0.128	-
HCM Control Delay (s)	-	-	19.3	11.7	10.2	0
HCM Lane LOS	-	-	C	B	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0.3	0.4	-

Intersection	
Int Delay, s/veh	0.7

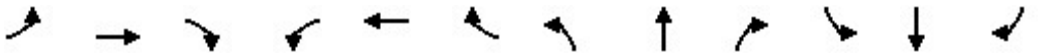
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	49	426	23	0	258
Future Vol, veh/h	0	49	426	23	0	258
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	1	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	1	2	0	1
Mvmt Flow	0	54	473	26	0	287

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	486	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.32	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	605	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	605	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

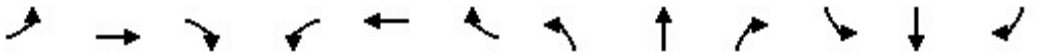
Approach	WB	NB	SB
HCM Control Delay, s	11.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	605	-
HCM Lane V/C Ratio	-	-	0.09	-
HCM Control Delay (s)	-	-	11.5	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.3	-

2022 Opening Year Build Scenario With Adjacent Development AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	118	196	75	212	444	74	149	97	287	147	50	175
Future Volume (vph)	118	196	75	212	444	74	149	97	287	147	50	175
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		225	200		185	175		0	150		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	50			75			100			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.888			0.885	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1653	1674	1451	1604	1696	1456	1557	1606	0	1645	1613	0
Flt Permitted	0.222			0.559			0.385			0.198		
Satd. Flow (perm)	386	1674	1451	944	1696	1456	631	1606	0	343	1613	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			101			101		156			169	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			370			464			336	
Travel Time (s)		14.1			6.3			12.7			6.5	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.90
Heavy Vehicles (%)	2%	6%	4%	1%	4%	3%	3%	0%	0%	0%	0%	2%
Adj. Flow (vph)	140	233	89	252	529	88	177	115	342	175	60	194
Shared Lane Traffic (%)												
Lane Group Flow (vph)	140	233	89	252	529	88	177	457	0	175	254	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	34	34	34	34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6	-6	-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6	-6	-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40	40	40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	3	1	6	7	3	8		7	4	
Switch Phase												

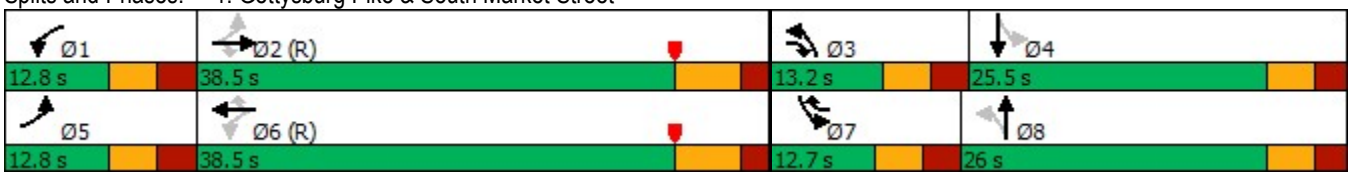


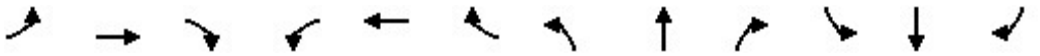
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0	3.0	3.0	10.0	3.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	10.6	39.6	19.0	9.6	16.6	9.5	19.0	9.5		9.5	9.5	
Total Split (s)	12.8	38.5	13.2	12.8	38.5	12.7	13.2	26.0		12.7	25.5	
Total Split (%)	14.2%	42.8%	14.7%	14.2%	42.8%	14.1%	14.7%	28.9%		14.1%	28.3%	
Maximum Green (s)	7.0	32.1	7.5	7.0	32.1	7.0	7.5	20.5		7.0	20.0	
Yellow Time (s)	3.2	4.4	3.2	3.2	4.4	3.2	3.2	3.2		3.2	3.2	
All-Red Time (s)	2.6	2.0	2.5	2.6	2.0	2.5	2.5	2.3		2.5	2.3	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.8	5.4	4.7	4.8	5.4	4.7	4.7	4.5		4.7	4.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0	3.0	3.0	6.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0	0.0	0.0	13.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max	None	None	C-Max	None	None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			22.0			22.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	42.4	33.9	47.8	42.6	34.0	47.4	29.0	20.7		28.0	20.2	
Actuated g/C Ratio	0.47	0.38	0.53	0.47	0.38	0.53	0.32	0.23		0.31	0.22	
v/c Ratio	0.48	0.37	0.11	0.50	0.83	0.11	0.61	0.93		0.79	0.52	
Control Delay	17.4	22.8	2.3	10.3	30.9	1.8	30.6	50.8		47.4	14.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	17.4	22.8	2.3	10.3	30.9	1.8	30.6	50.8		47.4	14.8	
LOS	B	C	A	B	C	A	C	D		D	B	
Approach Delay		17.2			22.0			45.2			28.1	
Approach LOS		B			C			D			C	
Queue Length 50th (ft)	32	77	0	41	225	5	55	139		54	31	
Queue Length 95th (ft)	53	116	12	m50	#327	m6	89	#247		#104	75	
Internal Link Dist (ft)		747			290			384			256	
Turn Bay Length (ft)	175		225	200		185	175			150		
Base Capacity (vph)	294	630	818	505	639	814	291	502		222	505	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.48	0.37	0.11	0.50	0.83	0.11	0.61	0.91		0.79	0.50	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 46 (51%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 28.3		Intersection LOS: C	
Intersection Capacity Utilization 80.4%		ICU Level of Service D	
Analysis Period (min) 15			

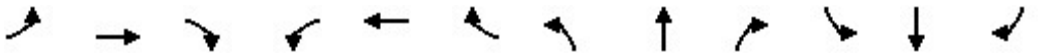
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	509	123	47	677	0	0	0	0	165	0	194
Future Volume (vph)	0	509	123	47	677	0	0	0	0	165	0	194
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		130	100		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.927	
Flt Protected				0.950							0.977	
Satd. Flow (prot)	0	1731	1485	1621	1748	0	0	0	0	0	1705	0
Flt Permitted				0.280							0.977	
Satd. Flow (perm)	0	1731	1485	478	1748	0	0	0	0	0	1705	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			133								121	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		199			608			453			537	
Travel Time (s)		3.4			10.4			10.3			12.2	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	4%	3%	2%	3%	0%	0%	0%	0%	3%	0%	3%
Adj. Flow (vph)	0	578	140	53	769	0	0	0	0	188	0	220
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	578	140	53	769	0	0	0	0	0	408	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												

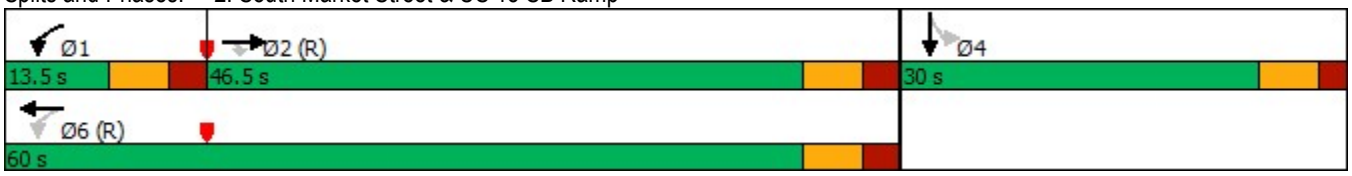


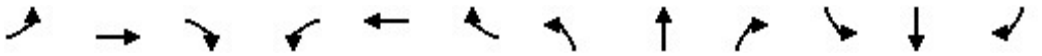
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		46.5	46.5	13.5	60.0					30.0	30.0	
Total Split (%)		51.7%	51.7%	15.0%	66.7%					33.3%	33.3%	
Maximum Green (s)		40.0	40.0	7.0	53.5					24.0	24.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		50.5	50.5	58.5	58.5						21.0	
Actuated g/C Ratio		0.56	0.56	0.65	0.65						0.23	
v/c Ratio		0.60	0.16	0.13	0.68						0.83	
Control Delay		15.1	2.9	2.1	6.7						37.7	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		15.1	2.9	2.1	6.7						37.7	
LOS		B	A	A	A						D	
Approach Delay		12.7			6.4						37.7	
Approach LOS		B			A						D	
Queue Length 50th (ft)		203	8	1	85						123	
Queue Length 95th (ft)		m248	m17	m3	m197						198	
Internal Link Dist (ft)		119			528			373			457	
Turn Bay Length (ft)			130	100								
Base Capacity (vph)		970	890	412	1136						561	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.60	0.16	0.13	0.68						0.73	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 15.3		Intersection LOS: B	
Intersection Capacity Utilization 86.4%		ICU Level of Service E	
Analysis Period (min) 15			

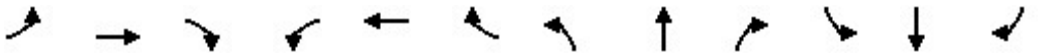
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US 15 SB Ramp





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	471	206	0	0	492	271	203	1	110	0	0	0
Future Volume (vph)	471	206	0	0	492	271	203	1	110	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.953				
Flt Protected	0.950							0.969				
Satd. Flow (prot)	1676	1642	0	0	1765	1479	0	1710	0	0	0	0
Flt Permitted	0.162							0.969				
Satd. Flow (perm)	286	1642	0	0	1765	1479	0	1710	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						298		27				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	6%	0%	0%	2%	0%	6%	0%	1%	0%	0%	0%
Adj. Flow (vph)	518	226	0	0	541	298	223	1	121	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	518	226	0	0	541	298	0	345	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												

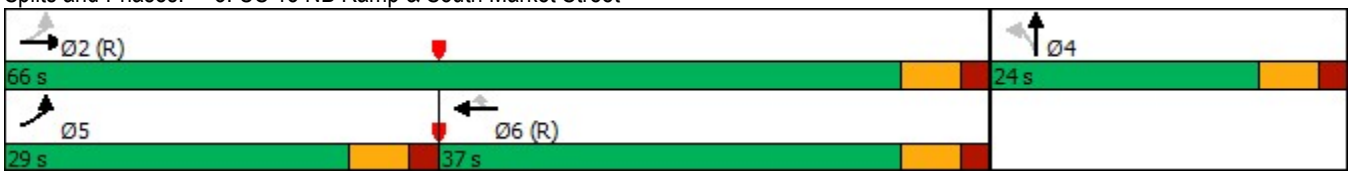


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	29.0	66.0			37.0	37.0	24.0	24.0				
Total Split (%)	32.2%	73.3%			41.1%	41.1%	26.7%	26.7%				
Maximum Green (s)	23.0	60.0			31.0	31.0	18.0	18.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	61.2	61.2			32.8	32.8		18.8				
Actuated g/C Ratio	0.68	0.68			0.36	0.36		0.21				
v/c Ratio	0.93	0.20			0.84	0.41		0.91				
Control Delay	43.4	3.1			40.5	4.4		62.4				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	43.4	3.1			40.5	4.4		62.4				
LOS	D	A			D	A		E				
Approach Delay		31.2			27.7			62.4				
Approach LOS		C			C			E				
Queue Length 50th (ft)	253	26			226	0		143				
Queue Length 95th (ft)	#372	m26			#374	42		#272				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	565	1116			643	728		382				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.92	0.20			0.84	0.41		0.90				

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 58 (64%), Referenced to phase 2:EBTL and 6:WBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 35.3		Intersection LOS: D	
Intersection Capacity Utilization 86.4%		ICU Level of Service E	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

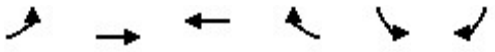
Splits and Phases: 3: US 15 NB Ramp & South Market Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	254	31	169	120	21	116
Future Volume (vph)	254	31	169	120	21	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		0%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.944			
Flt Protected	0.950					0.992
Satd. Flow (prot)	1770	1583	1758	0	0	1823
Flt Permitted	0.950					0.992
Satd. Flow (perm)	1770	1583	1758	0	0	1823
Link Speed (mph)	25		25			35
Link Distance (ft)	189		336			230
Travel Time (s)	5.2		9.2			4.5
Confl. Peds. (#/hr)					121	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	282	34	188	133	23	129
Shared Lane Traffic (%)						
Lane Group Flow (vph)	282	34	321	0	0	152
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	630	730	144	0	0
Future Volume (vph)	0	630	730	144	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	1900	1844	1552	0	0
Flt Permitted						
Satd. Flow (perm)	0	1900	1844	1552	0	0
Link Speed (mph)		30	40		25	
Link Distance (ft)		370	199		166	
Travel Time (s)		8.4	3.4		4.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	2%	0%	0%
Adj. Flow (vph)	0	700	811	160	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	700	811	160	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		



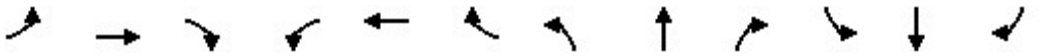
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	13	50	482	0	91	247
Future Volume (vph)	13	50	482	0	91	247
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-1%		-4%			4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950					0.987
Satd. Flow (prot)	1778	1591	1919	0	0	1802
Flt Permitted	0.950					0.987
Satd. Flow (perm)	1778	1591	1919	0	0	1802
Link Speed (mph)	25		25			25
Link Distance (ft)	240		376			464
Travel Time (s)	6.5		10.3			12.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	1%	2%	2%	2%
Adj. Flow (vph)	14	56	536	0	101	274
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	56	536	0	0	375
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.97	0.97	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.7%		ICU Level of Service B	
Analysis Period (min) 15			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	49	433	23	0	260
Future Volume (vph)	0	49	433	23	0	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%		1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865	0.993			
Flt Protected						
Satd. Flow (prot)	0	1603	1858	0	0	1872
Flt Permitted						
Satd. Flow (perm)	0	1603	1858	0	0	1872
Link Speed (mph)	25		25			25
Link Distance (ft)	254		129			376
Travel Time (s)	6.9		3.5			10.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	2%	1%	2%	0%	1%
Adj. Flow (vph)	0	54	481	26	0	289
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	54	507	0	0	289
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.2%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	196	75	212	444	74	149	97	287	147	50	175
Future Volume (veh/h)	118	196	75	212	444	74	149	97	287	147	50	175
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1921	1864	1892	1697	1655	1669	1795	1837	1837	1794	1866	1766
Adj Flow Rate, veh/h	140	233	74	252	529	20	177	115	286	175	60	178
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.90
Percent Heavy Veh, %	2	6	4	1	4	3	3	0	0	0	0	2
Cap, veh/h	299	685	741	494	627	662	355	112	277	232	97	287
Arrive On Green	0.08	0.37	0.37	0.09	0.38	0.38	0.09	0.24	0.24	0.09	0.23	0.23
Sat Flow, veh/h	1829	1864	1604	1616	1655	1414	1709	467	1161	1709	415	1230
Grp Volume(v), veh/h	140	233	74	252	529	20	177	0	401	175	0	238
Grp Sat Flow(s),veh/h/ln	1829	1864	1604	1616	1655	1414	1709	0	1628	1709	0	1645
Q Serve(g_s), s	4.1	8.1	2.3	8.0	26.3	0.7	7.0	0.0	21.5	7.0	0.0	11.7
Cycle Q Clear(g_c), s	4.1	8.1	2.3	8.0	26.3	0.7	7.0	0.0	21.5	7.0	0.0	11.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.71	1.00		0.75
Lane Grp Cap(c), veh/h	299	685	741	494	627	662	355	0	389	232	0	384
V/C Ratio(X)	0.47	0.34	0.10	0.51	0.84	0.03	0.50	0.00	1.03	0.75	0.00	0.62
Avail Cap(c_a), veh/h	320	685	741	494	627	662	355	0	389	232	0	384
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.2	20.6	13.6	16.9	25.5	12.9	23.6	0.0	34.3	25.5	0.0	30.9
Incr Delay (d2), s/veh	1.1	1.3	0.3	0.9	13.0	0.1	1.1	0.0	53.8	13.1	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.0	6.4	1.6	5.7	17.4	0.4	5.2	0.0	20.7	6.4	0.0	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.3	21.9	13.9	17.8	38.5	13.0	24.7	0.0	88.1	38.6	0.0	34.0
LnGrp LOS	C	C	B	B	D	B	C	A	F	D	A	C
Approach Vol, veh/h		447			801			578			413	
Approach Delay, s/veh		20.1			31.4			68.7			35.9	
Approach LOS		C			C			E			D	

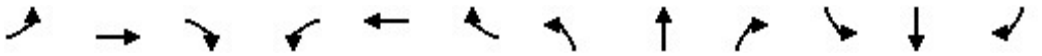
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	38.5	13.2	25.5	11.8	39.5	12.7	26.0
Change Period (Y+Rc), s	* 5.8	6.4	* 5.7	5.5	* 5.8	6.4	* 5.7	5.5
Max Green Setting (Gmax), s	* 7	32.1	* 7.5	20.0	* 7	32.1	* 7	20.5
Max Q Clear Time (g_c+I1), s	10.0	10.1	9.0	13.7	6.1	28.3	9.0	23.5
Green Ext Time (p_c), s	0.0	2.9	0.0	0.4	0.0	1.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	39.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



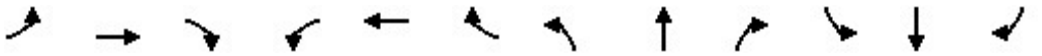
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	509	123	47	677	0	0	0	0	165	0	194
Future Volume (veh/h)	0	509	123	47	677	0	0	0	0	165	0	194
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1744	1758	1772	1758	0				1832	1950	1832
Adj Flow Rate, veh/h	0	578	0	53	769	0				188	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	4	3	2	3	0				3	0	3
Cap, veh/h	0	1122		523	1315	0				251	0	
Arrive On Green	0.00	0.64	0.00	0.01	0.25	0.00				0.14	0.00	0.00
Sat Flow, veh/h	0	1744	1490	1688	1758	0				1857	0	0
Grp Volume(v), veh/h	0	578	0	53	769	0				188	0	0
Grp Sat Flow(s),veh/h/ln	0	1744	1490	1688	1758	0				1857	0	0
Q Serve(g_s), s	0.0	15.9	0.0	0.9	34.7	0.0				8.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	15.9	0.0	0.9	34.7	0.0				8.8	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1122		523	1315	0				251	0	
V/C Ratio(X)	0.00	0.52		0.10	0.58	0.00				0.75	0.00	
Avail Cap(c_a), veh/h	0	1122		599	1315	0				516	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.43	0.43	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.6	0.0	6.0	21.6	0.0				37.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.7	0.0	0.0	0.8	0.0				4.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	9.1	0.0	0.4	20.6	0.0				7.6	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	10.3	0.0	6.1	22.4	0.0				41.9	0.0	6.0
LnGrp LOS	A	B		A	C	A				D	A	A
Approach Vol, veh/h		578	A		822						408	A
Approach Delay, s/veh		10.3			21.4						22.6	
Approach LOS		B			C						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.4	63.4		17.2		72.8
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	40.0		24.0		53.5
Max Q Clear Time (g_c+I1), s	2.9	17.9		10.8		36.7
Green Ext Time (p_c), s	0.0	0.3		0.5		0.5

Intersection Summary	
HCM 6th Ctrl Delay	18.1
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	471	206	0	0	492	271	203	1	110	0	0	0
Future Volume (veh/h)	471	206	0	0	492	271	203	1	110	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1772	1716	0	0	1772	1800	1752	1911	1823			
Adj Flow Rate, veh/h	518	226	0	0	541	0	223	1	0			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	6	0	0	2	0	6	0	1			
Cap, veh/h	623	1259	0	0	842		281	1				
Arrive On Green	0.34	1.00	0.00	0.00	0.48	0.00	0.16	0.16	0.00			
Sat Flow, veh/h	1688	1716	0	0	1772	1525	1812	8	0			
Grp Volume(v), veh/h	518	226	0	0	541	0	224	0	0			
Grp Sat Flow(s),veh/h/ln	1688	1716	0	0	1772	1525	1820	0	0			
Q Serve(g_s), s	14.1	0.0	0.0	0.0	20.8	0.0	10.7	0.0	0.0			
Cycle Q Clear(g_c), s	14.1	0.0	0.0	0.0	20.8	0.0	10.7	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	623	1259	0	0	842		282	0				
V/C Ratio(X)	0.83	0.18	0.00	0.00	0.64		0.79	0.00				
Avail Cap(c_a), veh/h	731	1259	0	0	842		384	0				
HCM Platoon Ratio	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.77	0.77	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	10.1	0.0	0.0	0.0	17.8	0.0	36.6	0.0	0.0			
Incr Delay (d2), s/veh	5.6	0.2	0.0	0.0	3.7	0.0	7.8	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	6.4	0.2	0.0	0.0	13.3	0.0	9.0	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	15.6	0.2	0.0	0.0	21.6	0.0	44.5	0.0	6.0			
LnGrp LOS	B	A	A	A	C		D	A	A			
Approach Vol, veh/h		744			541	A		345	A			
Approach Delay, s/veh		11.0			21.6			31.0				
Approach LOS		B			C			C				

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	71.0	19.0	23.3	47.8
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	60.0	18.0	23.0	31.0
Max Q Clear Time (g_c+I1), s	2.0	12.7	16.1	22.8
Green Ext Time (p_c), s	0.1	0.3	1.2	0.2

Intersection Summary	
HCM 6th Ctrl Delay	18.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	8.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	254	31	169	120	21	116
Future Vol, veh/h	254	31	169	120	21	116
Conflicting Peds, #/hr	0	0	0	0	121	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	282	34	188	133	23	129

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	551	376	0	0	442	0
Stage 1	376	-	-	-	-	-
Stage 2	175	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.3	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	560	710	-	-	846	-
Stage 1	716	-	-	-	-	-
Stage 2	991	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	487	638	-	-	761	-
Mov Cap-2 Maneuver	487	-	-	-	-	-
Stage 1	644	-	-	-	-	-
Stage 2	958	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.9	0	1.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	487	638	761	-
HCM Lane V/C Ratio	-	-	0.58	0.054	0.031	-
HCM Control Delay (s)	-	-	22.1	11	9.9	0
HCM Lane LOS	-	-	C	B	A	A
HCM 95th %tile Q(veh)	-	-	3.6	0.2	0.1	-

Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	50	482	0	91	247
Future Vol, veh/h	13	50	482	0	91	247
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-4	-	-	4
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	1	2	2	2
Mvmt Flow	14	56	536	0	101	274

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1012	536	0	0	536	0
Stage 1	536	-	-	-	-	-
Stage 2	476	-	-	-	-	-
Critical Hdwy	6.22	6.12	-	-	4.3	-
Critical Hdwy Stg 1	6.2	-	-	-	-	-
Critical Hdwy Stg 2	5.22	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	309	583	-	-	784	-
Stage 1	591	-	-	-	-	-
Stage 2	729	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	262	583	-	-	784	-
Mov Cap-2 Maneuver	262	-	-	-	-	-
Stage 1	591	-	-	-	-	-
Stage 2	618	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.4	0	2.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	262	583	784	-
HCM Lane V/C Ratio	-	-	0.055	0.095	0.129	-
HCM Control Delay (s)	-	-	19.5	11.8	10.3	0
HCM Lane LOS	-	-	C	B	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0.3	0.4	-

Intersection	
Int Delay, s/veh	0.7

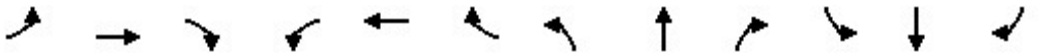
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	49	433	23	0	260
Future Vol, veh/h	0	49	433	23	0	260
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	1	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	1	2	0	1
Mvmt Flow	0	54	481	26	0	289

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	494	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.32	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	599	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	599	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

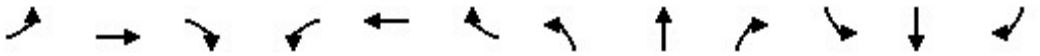
Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	599	-
HCM Lane V/C Ratio	-	-	0.091	-
HCM Control Delay (s)	-	-	11.6	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.3	-

2022 Opening Year Mitigation Scenario
AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	118	196	75	212	444	74	149	97	287	147	50	175
Future Volume (vph)	118	196	75	212	444	74	149	97	287	147	50	175
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		225	200		185	175		200	260		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	50			75			100			0		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.959				0.850			0.850		0.884	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1653	3067	0	1604	1696	1456	1557	1809	1538	1645	1611	0
Flt Permitted	0.318			0.503			0.336			0.563		
Satd. Flow (perm)	553	3067	0	849	1696	1456	551	1809	1538	975	1611	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		67				98			342		174	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			370			464			336	
Travel Time (s)		14.1			6.3			12.7			6.5	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	2%	6%	4%	1%	4%	3%	3%	0%	0%	0%	0%	2%
Adj. Flow (vph)	140	233	89	252	529	88	177	115	342	175	60	208
Shared Lane Traffic (%)												
Lane Group Flow (vph)	140	322	0	252	529	88	177	115	342	175	268	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template												
Leading Detector (ft)	34	34		34	34	34	39	39	39	34	34	
Trailing Detector (ft)	-6	-6		-6	-6	-6	-6	-6	-6	-6	-6	
Detector 1 Position(ft)	-6	-6		-6	-6	-6	-6	-6	-6	-6	-6	
Detector 1 Size(ft)	40	40		40	40	40	45	45	45	40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6	7	3	8	1	7	4	
Permitted Phases	2			6		6	8		8	4		
Detector Phase	5	2		1	6	7	3	8	1	7	4	
Switch Phase												



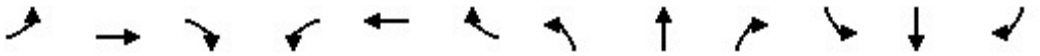
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Minimum Split (s)	9.8	22.4		9.8	26.5	9.7	9.8	21.5	9.8	9.7	21.5	
Total Split (s)	13.0	35.8		17.7	40.5	13.0	14.0	23.5	17.7	13.0	21.5	
Total Split (%)	14.4%	39.8%		19.7%	45.0%	14.4%	15.6%	26.1%	19.7%	14.4%	23.9%	
Maximum Green (s)	7.3	29.4		12.0	34.1	7.4	8.4	18.1	12.0	7.4	16.1	
Yellow Time (s)	3.1	4.4		3.1	4.4	3.1	3.1	3.1	3.1	3.1	3.1	
All-Red Time (s)	2.6	2.0		2.6	2.0	2.5	2.5	2.3	2.6	2.5	2.3	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.7	5.4		4.7	5.4	4.6	4.6	4.4	4.7	4.6	4.4	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0		3.0	6.0	3.0	3.0	3.0	3.0	3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	25.0		0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	13.0		0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	None	None	None	None	None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			22.0			22.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	46.3	37.5		53.7	41.2	57.4	20.9	13.2	27.0	21.5	12.2	
Actuated g/C Ratio	0.51	0.42		0.60	0.46	0.64	0.23	0.15	0.30	0.24	0.14	
v/c Ratio	0.37	0.24		0.42	0.68	0.09	0.76	0.43	0.49	0.56	0.73	
Control Delay	12.0	15.1		10.5	22.9	0.7	47.7	38.9	4.7	32.8	25.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	12.0	15.1		10.5	22.9	0.7	47.7	38.9	4.7	32.8	25.3	
LOS	B	B		B	C	A	D	D	A	C	C	
Approach Delay		14.2			17.1			22.9			28.2	
Approach LOS		B			B			C			C	
Queue Length 50th (ft)	25	38		39	178	0	64	48	0	63	40	
Queue Length 95th (ft)	49	63		m74	m233	m1	94	78	31	92	86	
Internal Link Dist (ft)		747			290			384			256	
Turn Bay Length (ft)	175			200		185	175		200	260		
Base Capacity (vph)	387	1316		625	776	964	233	383	716	313	462	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.36	0.24		0.40	0.68	0.09	0.76	0.30	0.48	0.56	0.58	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 35 (39%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 20.1		Intersection LOS: C	
Intersection Capacity Utilization 70.2%		ICU Level of Service C	
Analysis Period (min) 15			

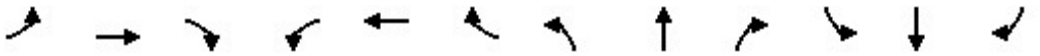
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	509	123	47	677	0	0	0	0	165	0	194
Future Volume (vph)	0	509	123	47	677	0	0	0	0	165	0	194
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	100		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	*0.71	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.927	
Flt Protected				0.950							0.977	
Satd. Flow (prot)	0	2458	1485	1621	1748	0	0	0	0	0	1705	0
Flt Permitted				0.289							0.977	
Satd. Flow (perm)	0	2458	1485	493	1748	0	0	0	0	0	1705	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140								121	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		199			608			453			537	
Travel Time (s)		3.4			10.4			10.3			12.2	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	4%	3%	2%	3%	0%	0%	0%	0%	3%	0%	3%
Adj. Flow (vph)	0	578	140	53	769	0	0	0	0	188	0	220
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	578	140	53	769	0	0	0	0	0	408	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												

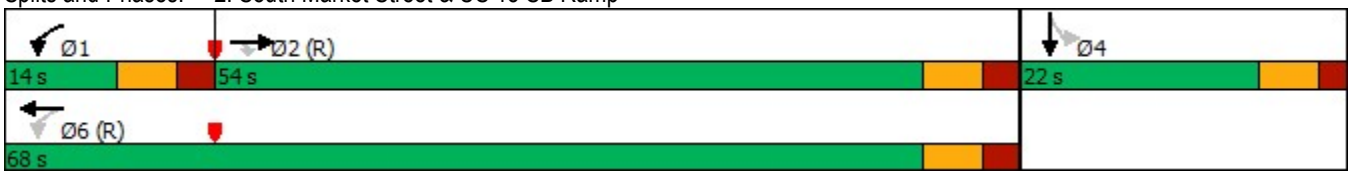


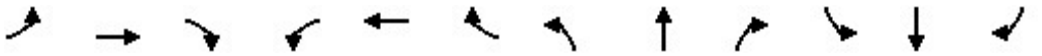
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		54.0	54.0	14.0	68.0					22.0	22.0	
Total Split (%)		60.0%	60.0%	15.6%	75.6%					24.4%	24.4%	
Maximum Green (s)		47.5	47.5	7.5	61.5					16.0	16.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		54.4	54.4	62.5	62.5						17.0	
Actuated g/C Ratio		0.60	0.60	0.69	0.69						0.19	
v/c Ratio		0.39	0.15	0.12	0.63						0.97	
Control Delay		13.7	4.8	0.9	8.7						64.8	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		13.7	4.8	0.9	8.7						64.8	
LOS		B	A	A	A						E	
Approach Delay		12.0			8.2						64.8	
Approach LOS		B			A						E	
Queue Length 50th (ft)		100	3	1	109						135	
Queue Length 95th (ft)		147	30	m1	m119						#273	
Internal Link Dist (ft)		119			528			373			457	
Turn Bay Length (ft)			125	100								
Base Capacity (vph)		1485	953	448	1213						420	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.39	0.15	0.12	0.63						0.97	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 21.5		Intersection LOS: C	
Intersection Capacity Utilization 83.2%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

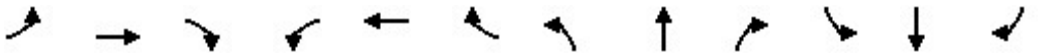
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US 15 SB Ramp





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	471	206	0	0	492	271	203	1	110	0	0	0
Future Volume (vph)	471	206	0	0	492	271	203	1	110	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	0		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	0			25			25			25		
Lane Util. Factor	*1.00	*1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.953				
Flt Protected	0.950							0.969				
Satd. Flow (prot)	1676	1642	0	0	1765	1479	0	1710	0	0	0	0
Flt Permitted	0.188							0.969				
Satd. Flow (perm)	332	1642	0	0	1765	1479	0	1710	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						298		27				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	6%	0%	0%	2%	0%	6%	0%	1%	0%	0%	0%
Adj. Flow (vph)	518	226	0	0	541	298	223	1	121	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	518	226	0	0	541	298	0	345	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		23			23			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												

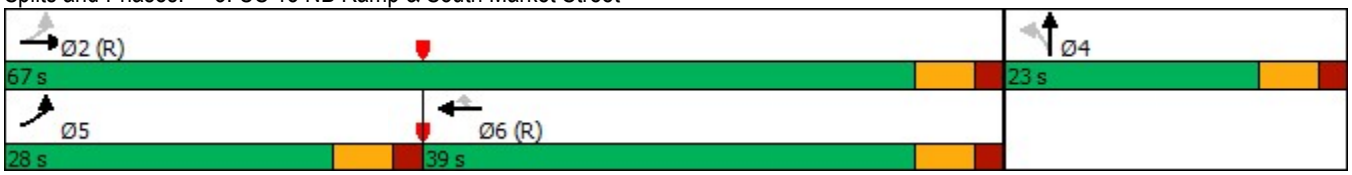


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	28.0	67.0			39.0	39.0	23.0	23.0				
Total Split (%)	31.1%	74.4%			43.3%	43.3%	25.6%	25.6%				
Maximum Green (s)	22.0	61.0			33.0	33.0	17.0	17.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	62.0	62.0			34.9	34.9		18.0				
Actuated g/C Ratio	0.69	0.69			0.39	0.39		0.20				
v/c Ratio	0.93	0.20			0.79	0.39		0.95				
Control Delay	62.4	2.2			35.0	4.1		71.1				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	62.4	2.2			35.0	4.1		71.1				
LOS	E	A			C	A		E				
Approach Delay		44.1			24.0			71.1				
Approach LOS		D			C			E				
Queue Length 50th (ft)	209	13			217	0		145				
Queue Length 95th (ft)	#296	m16			#355	40		#281				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)						260						
Base Capacity (vph)	572	1131			684	756		363				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.91	0.20			0.79	0.39		0.95				

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 40.2		Intersection LOS: D	
Intersection Capacity Utilization 83.2%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

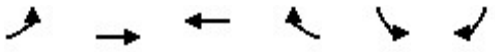
Splits and Phases: 3: US 15 NB Ramp & South Market Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	254	31	169	120	21	116
Future Volume (vph)	254	31	169	120	21	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		0%			1%
Storage Length (ft)	0	0		0	75	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.944			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1758	0	1761	1835
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	1758	0	1761	1835
Link Speed (mph)	25		25			35
Link Distance (ft)	189		336			230
Travel Time (s)	5.2		9.2			4.5
Confl. Peds. (#/hr)					121	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	282	34	188	133	23	129
Shared Lane Traffic (%)						
Lane Group Flow (vph)	282	34	321	0	23	129
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.2%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	630	730	144	0	0
Future Volume (vph)	0	630	730	144	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	4%		0%	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	3610	1844	1552	0	0
Flt Permitted						
Satd. Flow (perm)	0	3610	1844	1552	0	0
Link Speed (mph)		30	40		25	
Link Distance (ft)		370	199		166	
Travel Time (s)		8.4	3.4		4.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	2%	0%	0%
Adj. Flow (vph)	0	700	811	160	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	700	811	160	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		



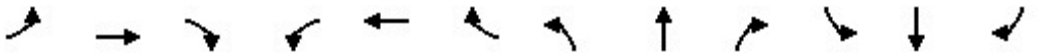
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	13	50	482	0	91	247
Future Volume (vph)	13	50	482	0	91	247
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-1%		-4%			4%
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1778	1591	1919	0	1734	1825
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1778	1591	1919	0	1734	1825
Link Speed (mph)	25		25			25
Link Distance (ft)	240		376			464
Travel Time (s)	6.5		10.3			12.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	1%	2%	2%	2%
Adj. Flow (vph)	14	56	536	0	101	274
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	56	536	0	101	274
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.97	0.97	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	49	433	23	0	260
Future Volume (vph)	0	49	433	23	0	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%		1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865	0.993			
Flt Protected						
Satd. Flow (prot)	0	1603	1858	0	0	1872
Flt Permitted						
Satd. Flow (perm)	0	1603	1858	0	0	1872
Link Speed (mph)	25		25			25
Link Distance (ft)	254		129			376
Travel Time (s)	6.9		3.5			10.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	2%	1%	2%	0%	1%
Adj. Flow (vph)	0	54	481	26	0	289
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	54	507	0	0	289
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.2%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	196	75	212	444	74	149	97	287	147	50	175
Future Volume (veh/h)	118	196	75	212	444	74	149	97	287	147	50	175
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1921	1864	1892	1697	1655	1669	1795	1837	1837	1794	1866	1766
Adj Flow Rate, veh/h	140	233	74	252	529	20	177	115	286	175	60	191
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	6	4	1	4	3	3	0	0	0	0	2
Cap, veh/h	357	1005	311	588	702	732	296	355	493	371	71	227
Arrive On Green	0.08	0.38	0.38	0.12	0.42	0.42	0.10	0.19	0.19	0.09	0.18	0.18
Sat Flow, veh/h	1829	2662	824	1616	1655	1414	1709	1837	1557	1709	392	1249
Grp Volume(v), veh/h	140	153	154	252	529	20	177	115	286	175	0	251
Grp Sat Flow(s),veh/h/ln	1829	1771	1715	1616	1655	1414	1709	1837	1557	1709	0	1641
Q Serve(g_s), s	4.1	5.3	5.5	8.0	24.3	0.6	7.4	4.8	13.8	7.4	0.0	13.3
Cycle Q Clear(g_c), s	4.1	5.3	5.5	8.0	24.3	0.6	7.4	4.8	13.8	7.4	0.0	13.3
Prop In Lane	1.00		0.48	1.00		1.00	1.00		1.00	1.00		0.76
Lane Grp Cap(c), veh/h	357	669	648	588	702	732	296	355	493	371	0	298
V/C Ratio(X)	0.39	0.23	0.24	0.43	0.75	0.03	0.60	0.32	0.58	0.47	0.00	0.84
Avail Cap(c_a), veh/h	384	669	648	621	702	732	296	390	523	371	0	312
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.2	19.1	19.2	12.7	21.9	10.6	26.7	31.3	25.7	26.4	0.0	35.6
Incr Delay (d2), s/veh	0.7	0.8	0.9	0.5	7.3	0.1	3.3	0.5	1.4	0.9	0.0	17.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.9	3.9	4.0	4.8	15.2	0.4	5.9	4.0	9.0	5.4	0.0	10.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.9	19.9	20.0	13.2	29.2	10.7	30.1	31.8	27.2	27.4	0.0	53.3
LnGrp LOS	B	B	C	B	C	B	C	C	C	C	A	D
Approach Vol, veh/h		447			801			578			426	
Approach Delay, s/veh		19.3			23.7			29.0			42.6	
Approach LOS		B			C			C			D	

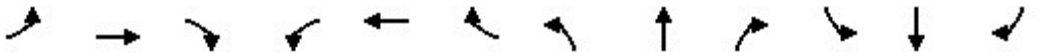
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.8	39.4	14.0	20.8	11.6	43.6	13.0	21.8
Change Period (Y+Rc), s	5.7	6.4	5.6	* 5.4	5.7	6.4	5.6	* 5.4
Max Green Setting (Gmax), s	12.0	29.4	8.4	* 16	7.3	34.1	7.4	* 18
Max Q Clear Time (g_c+I1), s	10.0	7.5	9.4	15.3	6.1	26.3	9.4	15.8
Green Ext Time (p_c), s	0.2	2.9	0.0	0.1	0.0	3.1	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	27.8
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



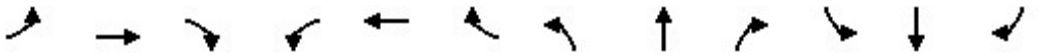
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	509	123	47	677	0	0	0	0	165	0	194
Future Volume (veh/h)	0	509	123	47	677	0	0	0	0	165	0	194
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1744	1758	1772	1758	0				1832	1950	1832
Adj Flow Rate, veh/h	0	578	0	53	769	0				188	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	4	3	2	3	0				3	0	3
Cap, veh/h	0	1599		579	1319	0				247	0	
Arrive On Green	0.00	0.65	0.00	0.09	1.00	0.00				0.13	0.00	0.00
Sat Flow, veh/h	0	2982	1490	1688	1758	0				1857	0	0
Grp Volume(v), veh/h	0	578	0	53	769	0				188	0	0
Grp Sat Flow(s),veh/h/ln	0	1238	1490	1688	1758	0				1857	0	0
Q Serve(g_s), s	0.0	9.7	0.0	0.8	0.0	0.0				8.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	9.7	0.0	0.8	0.0	0.0				8.8	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1599		579	1319	0				247	0	
V/C Ratio(X)	0.00	0.36		0.09	0.58	0.00				0.76	0.00	
Avail Cap(c_a), veh/h	0	1599		665	1319	0				351	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.51	0.51	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	7.4	0.0	4.5	0.0	0.0				37.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.0	1.0	0.0				6.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	4.0	0.0	0.4	0.6	0.0				7.8	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	8.0	0.0	4.5	1.0	0.0				43.7	0.0	6.0
LnGrp LOS	A	A		A	A	A				D	A	A
Approach Vol, veh/h		578	A		822						408	A
Approach Delay, s/veh		8.0			1.2						23.4	
Approach LOS		A			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.4	63.6		17.0		73.0
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.5	47.5		16.0		61.5
Max Q Clear Time (g_c+I1), s	2.8	11.7		10.8		2.0
Green Ext Time (p_c), s	0.0	0.5		0.3		0.5

Intersection Summary	
HCM 6th Ctrl Delay	8.4
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	471	206	0	0	492	271	203	1	110	0	0	0
Future Volume (veh/h)	471	206	0	0	492	271	203	1	110	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1772	1716	0	0	1772	1800	1752	1911	1823			
Adj Flow Rate, veh/h	518	226	0	0	541	0	223	1	0			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	6	0	0	2	0	6	0	1			
Cap, veh/h	623	1260	0	0	845		280	1				
Arrive On Green	0.34	1.00	0.00	0.00	0.48	0.00	0.15	0.15	0.00			
Sat Flow, veh/h	1688	1716	0	0	1772	1525	1812	8	0			
Grp Volume(v), veh/h	518	226	0	0	541	0	224	0	0			
Grp Sat Flow(s),veh/h/ln	1688	1716	0	0	1772	1525	1820	0	0			
Q Serve(g_s), s	14.1	0.0	0.0	0.0	20.7	0.0	10.7	0.0	0.0			
Cycle Q Clear(g_c), s	14.1	0.0	0.0	0.0	20.7	0.0	10.7	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	623	1260	0	0	845		281	0				
V/C Ratio(X)	0.83	0.18	0.00	0.00	0.64		0.80	0.00				
Avail Cap(c_a), veh/h	714	1260	0	0	845		364	0				
HCM Platoon Ratio	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.93	0.93	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	10.1	0.0	0.0	0.0	17.7	0.0	36.7	0.0	0.0			
Incr Delay (d2), s/veh	6.9	0.3	0.0	0.0	3.7	0.0	9.0	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	7.0	0.2	0.0	0.0	13.2	0.0	9.2	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	17.0	0.3	0.0	0.0	21.4	0.0	45.7	0.0	6.0			
LnGrp LOS	B	A	A	A	C		D	A	A			
Approach Vol, veh/h		744			541	A		345	A			
Approach Delay, s/veh		11.9			21.4			31.8				
Approach LOS		B			C			C				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		71.1		18.9	23.1	47.9			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		61.0		17.0	22.0	33.0			
Max Q Clear Time (g_c+I1), s		2.0		12.7	16.1	22.7			
Green Ext Time (p_c), s		0.1		0.3	1.1	0.3			

Intersection Summary									
HCM 6th Ctrl Delay		19.3							
HCM 6th LOS		B							

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	8.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	254	31	169	120	21	116
Future Vol, veh/h	254	31	169	120	21	116
Conflicting Peds, #/hr	0	0	0	0	121	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	282	34	188	133	23	129

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	551	376	0	0	442	0
Stage 1	376	-	-	-	-	-
Stage 2	175	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.3	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	560	710	-	-	846	-
Stage 1	716	-	-	-	-	-
Stage 2	991	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	488	638	-	-	761	-
Mov Cap-2 Maneuver	488	-	-	-	-	-
Stage 1	644	-	-	-	-	-
Stage 2	961	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.8	0	1.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	488	638	761	-
HCM Lane V/C Ratio	-	-	0.578	0.054	0.031	-
HCM Control Delay (s)	-	-	22	11	9.9	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	3.6	0.2	0.1	-

Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	50	482	0	91	247
Future Vol, veh/h	13	50	482	0	91	247
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-4	-	-	4
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	1	2	2	2
Mvmt Flow	14	56	536	0	101	274

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1012	536	0	0	536	0
Stage 1	536	-	-	-	-	-
Stage 2	476	-	-	-	-	-
Critical Hdwy	6.22	6.12	-	-	4.3	-
Critical Hdwy Stg 1	6.2	-	-	-	-	-
Critical Hdwy Stg 2	5.22	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	309	583	-	-	784	-
Stage 1	591	-	-	-	-	-
Stage 2	729	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	269	583	-	-	784	-
Mov Cap-2 Maneuver	269	-	-	-	-	-
Stage 1	591	-	-	-	-	-
Stage 2	635	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.3	0	2.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	269	583	784	-
HCM Lane V/C Ratio	-	-	0.054	0.095	0.129	-
HCM Control Delay (s)	-	-	19.1	11.8	10.3	-
HCM Lane LOS	-	-	C	B	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0.3	0.4	-

Intersection	
Int Delay, s/veh	0.7

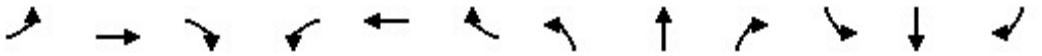
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	49	433	23	0	260
Future Vol, veh/h	0	49	433	23	0	260
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	1	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	1	2	0	1
Mvmt Flow	0	54	481	26	0	289

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	494	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.32	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	599	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	599	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

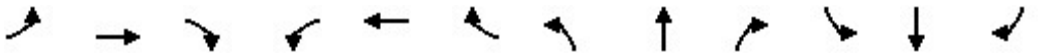
Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	599	-
HCM Lane V/C Ratio	-	-	0.091	-
HCM Control Delay (s)	-	-	11.6	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.3	-

2027 Horizon Year No Build Scenario
AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	278	53	159	543	77	108	78	248	39	39	54
Future Volume (vph)	38	278	53	159	543	77	108	78	248	39	39	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		0	200		185	175		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	50			75			100			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.976				0.850		0.886			0.913	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1591	1647	0	1604	1713	1456	1542	1603	0	1645	1633	0
Flt Permitted	0.228			0.387			0.533			0.325		
Satd. Flow (perm)	382	1647	0	653	1713	1456	865	1603	0	563	1633	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14				178		161			64	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			569			553			571	
Travel Time (s)		14.1			9.7			15.1			11.1	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	6%	5%	6%	1%	3%	3%	4%	0%	0%	0%	0%	6%
Adj. Flow (vph)	45	331	63	189	646	92	129	93	295	46	46	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	394	0	189	646	92	129	388	0	46	110	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	34	34		34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40		40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												

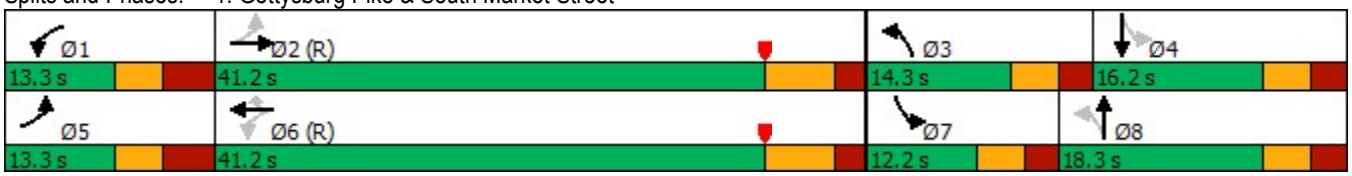


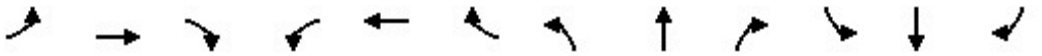
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0		3.0	10.0	10.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	10.6	39.6		9.6	16.6	16.6	10.5	9.5		9.5	9.5	
Total Split (s)	13.3	41.2		13.3	41.2	41.2	14.3	18.3		12.2	16.2	
Total Split (%)	15.6%	48.5%		15.6%	48.5%	48.5%	16.8%	21.5%		14.4%	19.1%	
Maximum Green (s)	7.0	34.8		7.0	34.8	34.8	9.1	12.9		7.0	10.8	
Yellow Time (s)	3.0	4.4		3.0	4.4	4.4	3.0	3.0		3.0	3.0	
All-Red Time (s)	3.3	2.0		3.3	2.0	2.0	2.2	2.4		2.2	2.4	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	5.3	5.4		5.3	5.4	5.4	4.2	4.4		4.2	4.4	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0		3.0	6.0	6.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0		0.0	25.0	25.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0		0.0	13.0	13.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		26.0			26.0	26.0		17.0			17.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	46.8	39.2		49.5	44.6	44.6	21.7	15.4		17.8	11.3	
Actuated g/C Ratio	0.55	0.46		0.58	0.52	0.52	0.26	0.18		0.21	0.13	
v/c Ratio	0.14	0.51		0.40	0.72	0.11	0.43	0.92		0.21	0.40	
Control Delay	8.9	19.7		12.2	22.9	2.0	28.2	50.4		24.1	21.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	8.9	19.7		12.2	22.9	2.0	28.2	50.4		24.1	21.2	
LOS	A	B		B	C	A	C	D		C	C	
Approach Delay		18.6			18.7			44.9			22.0	
Approach LOS		B			B			D			C	
Queue Length 50th (ft)	8	119		27	160	0	41	101		14	18	
Queue Length 95th (ft)	17	171		71	#360	m7	72	#213		31	49	
Internal Link Dist (ft)		747			489			473			491	
Turn Bay Length (ft)	175			200		185	175			150		
Base Capacity (vph)	326	767		469	898	848	300	422		220	289	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.14	0.51		0.40	0.72	0.11	0.43	0.92		0.21	0.38	

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 85			
Offset: 58 (68%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 25.5		Intersection LOS: C	
Intersection Capacity Utilization 73.4%		ICU Level of Service D	
Analysis Period (min) 15			

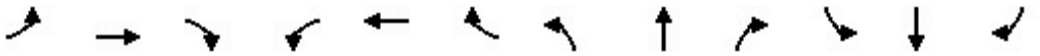
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	473	96	48	619	0	0	0	0	172	0	157
Future Volume (vph)	0	473	96	48	619	0	0	0	0	172	0	157
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	100		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.936	
Flt Protected				0.950							0.975	
Satd. Flow (prot)	0	1731	1485	1621	1748	0	0	0	0	0	1718	0
Flt Permitted				0.311							0.975	
Satd. Flow (perm)	0	1731	1485	531	1748	0	0	0	0	0	1718	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			122								128	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		569			608			453			537	
Travel Time (s)		9.7			10.4			10.3			12.2	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	4%	3%	2%	3%	0%	0%	0%	0%	3%	0%	3%
Adj. Flow (vph)	0	538	109	55	703	0	0	0	0	195	0	178
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	538	109	55	703	0	0	0	0	0	373	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												

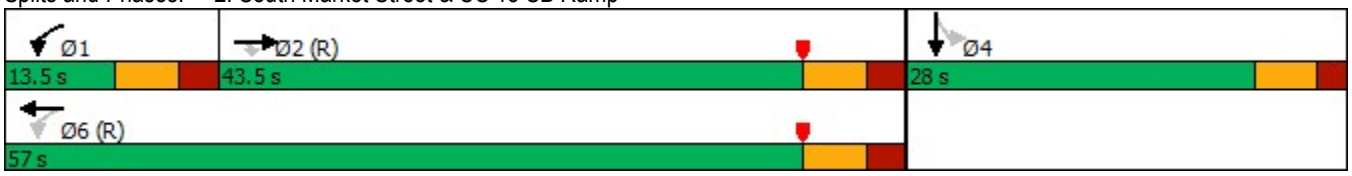


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		43.5	43.5	13.5	57.0					28.0	28.0	
Total Split (%)		51.2%	51.2%	15.9%	67.1%					32.9%	32.9%	
Maximum Green (s)		37.0	37.0	7.0	50.5					22.0	22.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		48.1	48.1	56.2	56.2						18.3	
Actuated g/C Ratio		0.57	0.57	0.66	0.66						0.22	
v/c Ratio		0.55	0.12	0.12	0.61						0.79	
Control Delay		20.4	4.9	18.3	22.6						32.7	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		20.4	4.9	18.3	22.6						32.7	
LOS		C	A	B	C						C	
Approach Delay		17.8			22.3						32.7	
Approach LOS		B			C						C	
Queue Length 50th (ft)		213	4	19	275						98	
Queue Length 95th (ft)		m278	m12	m24	m324						163	
Internal Link Dist (ft)		489			528			373			457	
Turn Bay Length (ft)			125	100								
Base Capacity (vph)		980	893	453	1155						558	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.55	0.12	0.12	0.61						0.67	

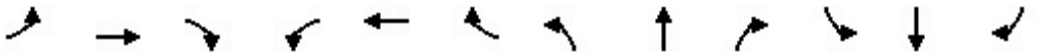
Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 85			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 22.8		Intersection LOS: C	
Intersection Capacity Utilization 82.4%		ICU Level of Service E	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US 15 SB Ramp



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	454	194	0	0	474	281	164	1	114	0	0	0
Future Volume (vph)	454	194	0	0	474	281	164	1	114	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.945				
Flt Protected	0.950							0.971				
Satd. Flow (prot)	1644	1642	0	0	1748	1479	0	1684	0	0	0	0
Flt Permitted	0.195							0.971				
Satd. Flow (perm)	337	1642	0	0	1748	1479	0	1684	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						309		37				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	4%	6%	0%	0%	3%	0%	8%	0%	1%	0%	0%	0%
Adj. Flow (vph)	499	213	0	0	521	309	180	1	125	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	499	213	0	0	521	309	0	306	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												

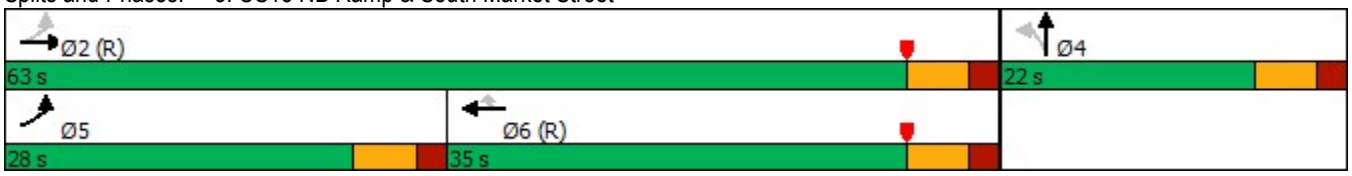


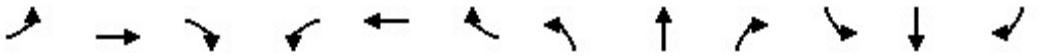
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	28.0	63.0			35.0	35.0	22.0	22.0				
Total Split (%)	32.9%	74.1%			41.2%	41.2%	25.9%	25.9%				
Maximum Green (s)	22.0	57.0			29.0	29.0	16.0	16.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	58.5	58.5			32.0	32.0		16.5				
Actuated g/C Ratio	0.69	0.69			0.38	0.38		0.19				
v/c Ratio	0.89	0.19			0.79	0.41		0.86				
Control Delay	36.3	13.1			35.5	4.3		53.4				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	36.3	13.1			35.5	4.3		53.4				
LOS	D	B			D	A		D				
Approach Delay		29.3			23.9			53.4				
Approach LOS		C			C			D				
Queue Length 50th (ft)	70	59			202	0		112				
Queue Length 95th (ft)	#189	m107			#343	41		#223				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	585	1130			656	748		366				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.85	0.19			0.79	0.41		0.84				

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 85			
Offset: 17 (20%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 30.9		Intersection LOS: C	
Intersection Capacity Utilization 82.4%		ICU Level of Service E	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: US15 NB Ramp & South Market Street





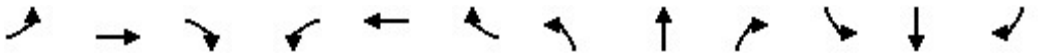
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	278	53	159	543	77	108	78	248	39	39	54
Future Volume (veh/h)	38	278	53	159	543	77	108	78	248	39	39	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1864	1878	1864	1697	1669	1669	1780	1837	1837	1794	1866	1710
Adj Flow Rate, veh/h	45	331	51	189	646	73	129	93	206	46	46	43
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	6	5	6	1	3	3	4	0	0	0	0	6
Cap, veh/h	376	756	117	555	886	751	329	83	184	158	99	92
Arrive On Green	0.04	0.48	0.48	0.12	0.71	0.71	0.10	0.16	0.16	0.04	0.11	0.11
Sat Flow, veh/h	1775	1589	245	1616	1669	1414	1696	508	1126	1709	887	830
Grp Volume(v), veh/h	45	0	382	189	646	73	129	0	299	46	0	89
Grp Sat Flow(s),veh/h/ln	1775	0	1834	1616	1669	1414	1696	0	1635	1709	0	1717
Q Serve(g_s), s	1.1	0.0	11.7	4.8	19.9	1.4	5.4	0.0	13.9	2.0	0.0	4.1
Cycle Q Clear(g_c), s	1.1	0.0	11.7	4.8	19.9	1.4	5.4	0.0	13.9	2.0	0.0	4.1
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.69	1.00		0.48
Lane Grp Cap(c), veh/h	376	0	873	555	886	751	329	0	267	158	0	191
V/C Ratio(X)	0.12	0.00	0.44	0.34	0.73	0.10	0.39	0.00	1.12	0.29	0.00	0.47
Avail Cap(c_a), veh/h	480	0	873	561	886	751	369	0	267	246	0	238
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.76	0.76	0.76	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.9	0.0	14.7	9.3	8.8	6.1	27.5	0.0	35.6	31.8	0.0	35.4
Incr Delay (d2), s/veh	0.1	0.0	1.6	0.3	4.0	0.2	0.8	0.0	90.7	1.0	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	0.0	8.3	2.5	8.4	0.8	4.0	0.0	18.9	1.5	0.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.0	0.0	16.3	9.6	12.8	6.3	28.3	0.0	126.3	32.8	0.0	37.2
LnGrp LOS	B	A	B	A	B	A	C	A	F	C	A	D
Approach Vol, veh/h		427			908			428			135	
Approach Delay, s/veh		15.9			11.6			96.7			35.7	
Approach LOS		B			B			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	45.9	12.3	13.9	8.3	50.5	7.9	18.3
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 7	34.8	* 9.1	10.8	* 7	34.8	* 7	12.9
Max Q Clear Time (g_c+I1), s	6.8	13.7	7.4	6.1	3.1	21.9	4.0	15.9
Green Ext Time (p_c), s	0.0	3.9	0.1	0.1	0.0	6.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	33.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



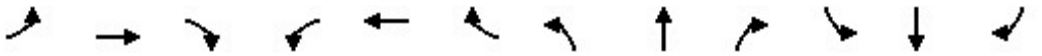
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	473	96	48	619	0	0	0	0	172	0	157
Future Volume (veh/h)	0	473	96	48	619	0	0	0	0	172	0	157
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1744	1758	1772	1758	0				1832	1950	1832
Adj Flow Rate, veh/h	0	538	0	55	703	0				195	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	4	3	2	3	0				3	0	3
Cap, veh/h	0	1090		560	1294	0				261	0	
Arrive On Green	0.00	0.63	0.00	0.09	1.00	0.00				0.14	0.00	0.00
Sat Flow, veh/h	0	1744	1490	1688	1758	0				1857	0	0
Grp Volume(v), veh/h	0	538	0	55	703	0				195	0	0
Grp Sat Flow(s),veh/h/ln	0	1744	1490	1688	1758	0				1857	0	0
Q Serve(g_s), s	0.0	14.2	0.0	0.9	0.0	0.0				8.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	14.2	0.0	0.9	0.0	0.0				8.6	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1090		560	1294	0				261	0	
V/C Ratio(X)	0.00	0.49		0.10	0.54	0.00				0.75	0.00	
Avail Cap(c_a), veh/h	0	1090		641	1294	0				502	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.87	0.00	0.51	0.51	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.6	0.0	5.5	0.0	0.0				35.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.4	0.0	0.0	0.8	0.0				4.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	8.0	0.0	0.4	0.5	0.0				7.4	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	10.0	0.0	5.5	0.8	0.0				39.3	0.0	6.0
LnGrp LOS	A	B		A	A	A				D	A	A
Approach Vol, veh/h		538	A		758						373	A
Approach Delay, s/veh		10.0			1.2						23.4	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.4	58.7		16.9		68.1
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	37.0		22.0		50.5
Max Q Clear Time (g_c+I1), s	2.9	16.2		10.6		2.0
Green Ext Time (p_c), s	0.0	0.3		0.5		0.4

Intersection Summary	
HCM 6th Ctrl Delay	9.0
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	454	194	0	0	474	281	164	1	114	0	0	0
Future Volume (veh/h)	454	194	0	0	474	281	164	1	114	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1744	1716	0	0	1758	1800	1724	1911	1823			
Adj Flow Rate, veh/h	499	213	0	0	521	0	180	1	0			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	4	6	0	0	3	0	8	0	1			
Cap, veh/h	654	1287	0	0	874		240	1				
Arrive On Green	0.32	1.00	0.00	0.00	0.50	0.00	0.13	0.13	0.00			
Sat Flow, veh/h	1661	1716	0	0	1758	1525	1810	10	0			
Grp Volume(v), veh/h	499	213	0	0	521	0	181	0	0			
Grp Sat Flow(s),veh/h/ln	1661	1716	0	0	1758	1525	1820	0	0			
Q Serve(g_s), s	12.3	0.0	0.0	0.0	18.0	0.0	8.1	0.0	0.0			
Cycle Q Clear(g_c), s	12.3	0.0	0.0	0.0	18.0	0.0	8.1	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		0.00			
Lane Grp Cap(c), veh/h	654	1287	0	0	874		241	0				
V/C Ratio(X)	0.76	0.17	0.00	0.00	0.60		0.75	0.00				
Avail Cap(c_a), veh/h	781	1287	0	0	874		364	0				
HCM Platoon Ratio	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.82	0.82	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	8.2	0.0	0.0	0.0	15.3	0.0	35.5	0.0	0.0			
Incr Delay (d2), s/veh	3.1	0.2	0.0	0.0	3.0	0.0	4.7	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	4.4	0.1	0.0	0.0	11.4	0.0	6.9	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	11.3	0.2	0.0	0.0	18.3	0.0	40.2	0.0	6.0			
LnGrp LOS	B	A	A	A	B		D	A	A			
Approach Vol, veh/h		712			521	A		306	A			
Approach Delay, s/veh		8.0			18.3			26.2				
Approach LOS		A			B			C				

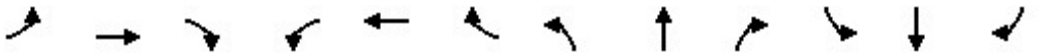
Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		68.7		16.3	21.5	47.3						
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0						
Max Green Setting (Gmax), s		57.0		16.0	22.0	29.0						
Max Q Clear Time (g_c+I1), s		2.0		10.1	14.3	20.0						
Green Ext Time (p_c), s		0.1		0.3	1.2	0.2						

Intersection Summary												
HCM 6th Ctrl Delay			15.1									
HCM 6th LOS			B									

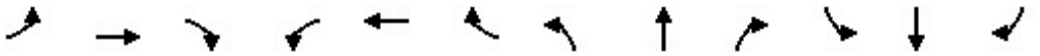
Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

2027 Horizon Year No Build Scenario With Adjacent Development AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	284	54	159	574	77	115	78	248	39	39	57
Future Volume (vph)	39	284	54	159	574	77	115	78	248	39	39	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		225	200		185	175		0	150		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	50			75			100			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.886			0.911	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1591	1690	1423	1604	1713	1456	1542	1603	0	1645	1628	0
Flt Permitted	0.214			0.449			0.526			0.396		
Satd. Flow (perm)	358	1690	1423	758	1713	1456	854	1603	0	686	1628	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			107			107		157			68	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			569			553			571	
Travel Time (s)		14.1			9.7			15.1			11.1	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	6%	5%	6%	1%	3%	3%	4%	0%	0%	0%	0%	6%
Adj. Flow (vph)	46	338	64	189	683	92	137	93	295	46	46	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	46	338	64	189	683	92	137	388	0	46	114	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	34	34	34	34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6	-6	-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6	-6	-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40	40	40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	3	1	6	7	3	8		7	4	
Switch Phase												

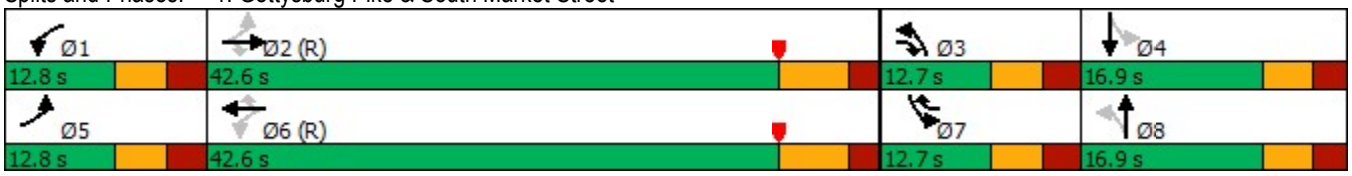


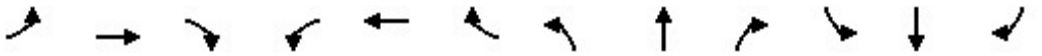
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0	3.0	3.0	10.0	3.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	10.6	39.6	10.5	9.6	16.6	9.5	10.5	9.5		9.5	9.5	
Total Split (s)	12.8	42.6	12.7	12.8	42.6	12.7	12.7	16.9		12.7	16.9	
Total Split (%)	15.1%	50.1%	14.9%	15.1%	50.1%	14.9%	14.9%	19.9%		14.9%	19.9%	
Maximum Green (s)	7.0	36.2	7.0	7.0	36.2	7.0	7.0	11.4		7.0	11.4	
Yellow Time (s)	3.2	4.4	3.2	3.2	4.4	3.2	3.2	3.2		3.2	3.2	
All-Red Time (s)	2.6	2.0	2.5	2.6	2.0	2.5	2.5	2.3		2.5	2.3	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.8	5.4	4.7	4.8	5.4	4.7	4.7	4.5		4.7	4.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0	3.0	3.0	6.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0	0.0	0.0	13.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max	None	None	C-Max	None	None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			22.0			22.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	48.0	39.9	54.2	50.4	45.0	58.1	18.6	12.4		17.3	11.1	
Actuated g/C Ratio	0.56	0.47	0.64	0.59	0.53	0.68	0.22	0.15		0.20	0.13	
v/c Ratio	0.15	0.43	0.07	0.36	0.75	0.09	0.53	1.06		0.20	0.42	
Control Delay	8.5	18.1	0.7	4.8	17.7	0.5	32.8	86.5		24.5	20.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	8.5	18.1	0.7	4.8	17.7	0.5	32.8	86.5		24.5	20.6	
LOS	A	B	A	A	B	A	C	F		C	C	
Approach Delay		14.6			13.5			72.5			21.7	
Approach LOS		B			B			E			C	
Queue Length 50th (ft)	7	98	0	15	254	2	45	~121		14	18	
Queue Length 95th (ft)	17	142	3	m22	#390	m1	77	#227		32	50	
Internal Link Dist (ft)		747			489			473			491	
Turn Bay Length (ft)	175		225	200		185	175			150		
Base Capacity (vph)	320	793	945	529	907	1034	258	367		232	295	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.14	0.43	0.07	0.36	0.75	0.09	0.53	1.06		0.20	0.39	

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 85			
Offset: 48 (56%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.06			
Intersection Signal Delay: 29.1		Intersection LOS: C	
Intersection Capacity Utilization 75.2%		ICU Level of Service D	
Analysis Period (min) 15			

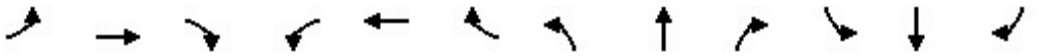
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	478	97	48	643	0	0	0	0	172	0	164
Future Volume (vph)	0	478	97	48	643	0	0	0	0	172	0	164
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	100		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.934	
Flt Protected				0.950							0.975	
Satd. Flow (prot)	0	1731	1485	1621	1748	0	0	0	0	0	1714	0
Flt Permitted				0.306							0.975	
Satd. Flow (perm)	0	1731	1485	522	1748	0	0	0	0	0	1714	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			122								128	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		569			608			453			537	
Travel Time (s)		9.7			10.4			10.3			12.2	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	4%	3%	2%	3%	0%	0%	0%	0%	3%	0%	3%
Adj. Flow (vph)	0	543	110	55	731	0	0	0	0	195	0	186
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	543	110	55	731	0	0	0	0	0	381	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												

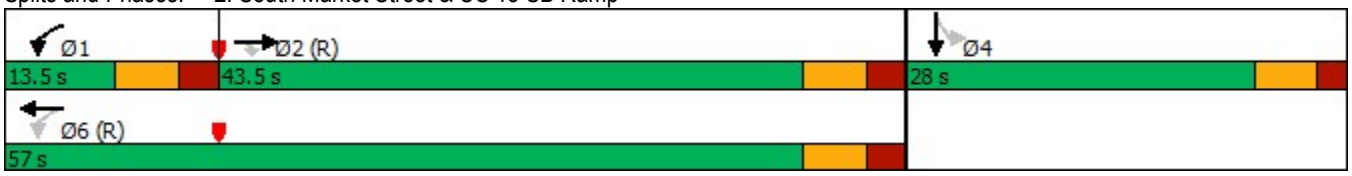


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		43.5	43.5	13.5	57.0					28.0	28.0	
Total Split (%)		51.2%	51.2%	15.9%	67.1%					32.9%	32.9%	
Maximum Green (s)		37.0	37.0	7.0	50.5					22.0	22.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		47.8	47.8	55.9	55.9						18.6	
Actuated g/C Ratio		0.56	0.56	0.66	0.66						0.22	
v/c Ratio		0.56	0.12	0.13	0.64						0.80	
Control Delay		12.4	1.8	2.2	6.7						33.4	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		12.4	1.8	2.2	6.7						33.4	
LOS		B	A	A	A						C	
Approach Delay		10.6			6.4						33.4	
Approach LOS		B			A						C	
Queue Length 50th (ft)		129	4	1	77						102	
Queue Length 95th (ft)		m151	m8	m4	m173						168	
Internal Link Dist (ft)		489			528			373			457	
Turn Bay Length (ft)			125	100								
Base Capacity (vph)		974	889	446	1148						557	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.56	0.12	0.12	0.64						0.68	

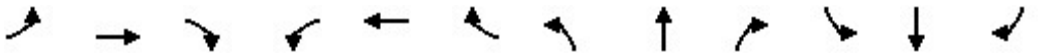
Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 85			
Offset: 8 (9%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 13.6		Intersection LOS: B	
Intersection Capacity Utilization 84.0%		ICU Level of Service E	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US 15 SB Ramp



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	458	195	0	0	491	281	171	1	114	0	0	0
Future Volume (vph)	458	195	0	0	491	281	171	1	114	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.946				
Flt Protected	0.950							0.971				
Satd. Flow (prot)	1644	1642	0	0	1748	1479	0	1685	0	0	0	0
Flt Permitted	0.202							0.971				
Satd. Flow (perm)	350	1642	0	0	1748	1479	0	1685	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						309		35				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	4%	6%	0%	0%	3%	0%	8%	0%	1%	0%	0%	0%
Adj. Flow (vph)	503	214	0	0	540	309	188	1	125	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	503	214	0	0	540	309	0	314	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												

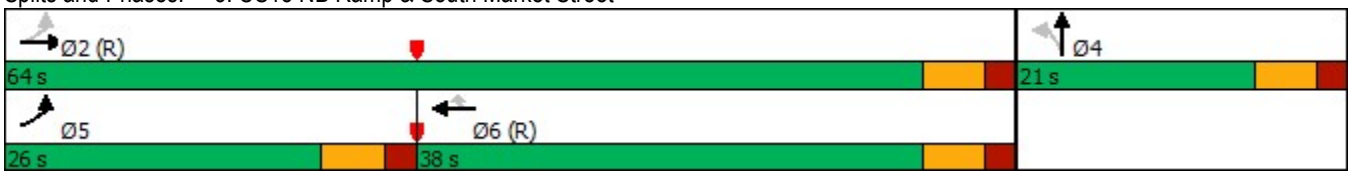


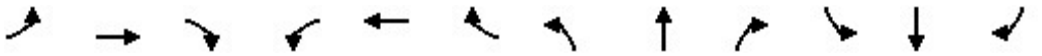
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	26.0	64.0			38.0	38.0	21.0	21.0				
Total Split (%)	30.6%	75.3%			44.7%	44.7%	24.7%	24.7%				
Maximum Green (s)	20.0	58.0			32.0	32.0	15.0	15.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	59.0	59.0			33.9	33.9		16.0				
Actuated g/C Ratio	0.69	0.69			0.40	0.40		0.19				
v/c Ratio	0.92	0.19			0.77	0.40		0.91				
Control Delay	39.2	2.4			32.0	3.9		62.5				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	39.2	2.4			32.0	3.9		62.5				
LOS	D	A			C	A		E				
Approach Delay		28.2			21.8			62.5				
Approach LOS		C			C			E				
Queue Length 50th (ft)	224	19			200	0		119				
Queue Length 95th (ft)	#332	m20			#334	39		#242				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	562	1139			697	776		345				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.90	0.19			0.77	0.40		0.91				

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 85			
Offset: 60 (71%), Referenced to phase 2:EBTL and 6:WBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 31.0		Intersection LOS: C	
Intersection Capacity Utilization 84.0%		ICU Level of Service E	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: US15 NB Ramp & South Market Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	284	54	159	574	77	115	78	248	39	39	57
Future Volume (veh/h)	39	284	54	159	574	77	115	78	248	39	39	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1864	1878	1864	1697	1669	1669	1780	1837	1837	1794	1866	1710
Adj Flow Rate, veh/h	46	338	52	189	683	73	137	93	206	46	46	47
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	6	5	6	1	3	3	4	0	0	0	0	6
Cap, veh/h	516	926	928	593	912	834	301	74	164	159	80	82
Arrive On Green	0.04	0.49	0.49	0.18	1.00	1.00	0.09	0.15	0.15	0.04	0.10	0.10
Sat Flow, veh/h	1775	1878	1579	1616	1669	1414	1696	508	1126	1709	846	864
Grp Volume(v), veh/h	46	338	52	189	683	73	137	0	299	46	0	93
Grp Sat Flow(s),veh/h/ln	1775	1878	1579	1616	1669	1414	1696	0	1635	1709	0	1711
Q Serve(g_s), s	1.1	9.5	1.2	4.6	0.0	0.0	5.9	0.0	12.4	2.0	0.0	4.4
Cycle Q Clear(g_c), s	1.1	9.5	1.2	4.6	0.0	0.0	5.9	0.0	12.4	2.0	0.0	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.69	1.00		0.51
Lane Grp Cap(c), veh/h	516	926	928	593	912	834	301	0	238	159	0	163
V/C Ratio(X)	0.09	0.36	0.06	0.32	0.75	0.09	0.46	0.00	1.25	0.29	0.00	0.57
Avail Cap(c_a), veh/h	619	926	928	600	912	834	301	0	238	246	0	250
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.73	0.73	0.73	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.7	13.3	7.5	7.7	0.0	0.0	29.2	0.0	36.3	32.8	0.0	36.8
Incr Delay (d2), s/veh	0.1	1.1	0.1	0.2	4.1	0.2	1.1	0.0	143.9	1.0	0.0	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	6.9	0.7	2.1	1.9	0.1	4.5	0.0	22.7	1.5	0.0	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.7	14.4	7.6	7.9	4.1	0.2	30.3	0.0	180.2	33.8	0.0	40.0
LnGrp LOS	A	B	A	A	A	A	C	A	F	C	A	D
Approach Vol, veh/h		436			945			436			139	
Approach Delay, s/veh		13.1			4.6			133.1			37.9	
Approach LOS		B			A			F			D	

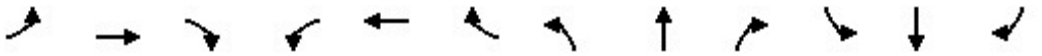
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.4	47.3	12.7	12.6	7.8	51.9	8.4	16.9
Change Period (Y+Rc), s	* 5.8	6.4	* 5.7	5.5	* 5.8	6.4	* 5.7	5.5
Max Green Setting (Gmax), s	* 7	36.2	* 7	11.4	* 7	36.2	* 7	11.4
Max Q Clear Time (g_c+I1), s	6.6	11.5	7.9	6.4	3.1	2.0	4.0	14.4
Green Ext Time (p_c), s	0.0	4.1	0.0	0.1	0.0	10.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	37.5
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



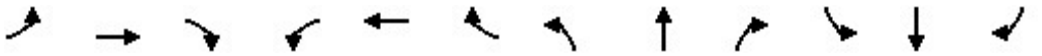
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	478	97	48	643	0	0	0	0	172	0	164
Future Volume (veh/h)	0	478	97	48	643	0	0	0	0	172	0	164
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1744	1758	1772	1758	0				1832	1950	1832
Adj Flow Rate, veh/h	0	543	0	55	731	0				195	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	4	3	2	3	0				3	0	3
Cap, veh/h	0	1090		556	1294	0				261	0	
Arrive On Green	0.00	0.63	0.00	0.02	0.24	0.00				0.14	0.00	0.00
Sat Flow, veh/h	0	1744	1490	1688	1758	0				1857	0	0
Grp Volume(v), veh/h	0	543	0	55	731	0				195	0	0
Grp Sat Flow(s),veh/h/ln	0	1744	1490	1688	1758	0				1857	0	0
Q Serve(g_s), s	0.0	14.4	0.0	0.9	31.0	0.0				8.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	14.4	0.0	0.9	31.0	0.0				8.6	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1090		556	1294	0				261	0	
V/C Ratio(X)	0.00	0.50		0.10	0.57	0.00				0.75	0.00	
Avail Cap(c_a), veh/h	0	1090		637	1294	0				502	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.92	0.00	0.54	0.54	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.7	0.0	6.0	20.2	0.0				35.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.5	0.0	0.0	1.0	0.0				4.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	8.2	0.0	0.4	19.2	0.0				7.4	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	10.2	0.0	6.0	21.2	0.0				39.3	0.0	6.0
LnGrp LOS	A	B		A	C	A				D	A	A
Approach Vol, veh/h		543	A		786						381	A
Approach Delay, s/veh		10.2			20.1						23.1	
Approach LOS		B			C						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.4	58.7		16.9		68.1
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	37.0		22.0		50.5
Max Q Clear Time (g_c+I1), s	2.9	16.4		10.6		33.0
Green Ext Time (p_c), s	0.0	0.3		0.5		0.4

Intersection Summary	
HCM 6th Ctrl Delay	17.6
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	458	195	0	0	491	281	171	1	114	0	0	0
Future Volume (veh/h)	458	195	0	0	491	281	171	1	114	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1744	1716	0	0	1758	1800	1724	1911	1823			
Adj Flow Rate, veh/h	503	214	0	0	540	0	188	1	0			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	4	6	0	0	3	0	8	0	1			
Cap, veh/h	636	1280	0	0	864		247	1				
Arrive On Green	0.33	1.00	0.00	0.00	0.49	0.00	0.14	0.14	0.00			
Sat Flow, veh/h	1661	1716	0	0	1758	1525	1811	10	0			
Grp Volume(v), veh/h	503	214	0	0	540	0	189	0	0			
Grp Sat Flow(s),veh/h/ln	1661	1716	0	0	1758	1525	1820	0	0			
Q Serve(g_s), s	12.6	0.0	0.0	0.0	19.2	0.0	8.5	0.0	0.0			
Cycle Q Clear(g_c), s	12.6	0.0	0.0	0.0	19.2	0.0	8.5	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		0.00			
Lane Grp Cap(c), veh/h	636	1280	0	0	864		249	0				
V/C Ratio(X)	0.79	0.17	0.00	0.00	0.62		0.76	0.00				
Avail Cap(c_a), veh/h	722	1280	0	0	864		343	0				
HCM Platoon Ratio	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.81	0.81	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	8.9	0.0	0.0	0.0	15.8	0.0	35.4	0.0	0.0			
Incr Delay (d2), s/veh	4.4	0.2	0.0	0.0	3.4	0.0	6.4	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	5.2	0.1	0.0	0.0	12.1	0.0	7.4	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	13.2	0.2	0.0	0.0	19.2	0.0	41.8	0.0	6.0			
LnGrp LOS	B	A	A	A	B		D	A	A			
Approach Vol, veh/h		717			540	A		314	A			
Approach Delay, s/veh		9.4			19.2			27.5				
Approach LOS		A			B			C				

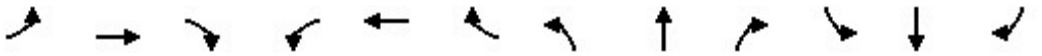
Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		68.4		16.6	21.6	46.8			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		58.0		15.0	20.0	32.0			
Max Q Clear Time (g_c+I1), s		2.0		10.5	14.6	21.2			
Green Ext Time (p_c), s		0.1		0.2	1.0	0.3			

Intersection Summary		
HCM 6th Ctrl Delay	16.4	
HCM 6th LOS	B	

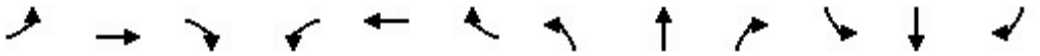
Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

2027 Horizon Year Build Scenario
AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	118	200	76	218	432	77	145	100	295	148	51	174
Future Volume (vph)	118	200	76	218	432	77	145	100	295	148	51	174
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		0	200		185	175		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	50			75			100			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.959				0.850		0.888			0.884	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1653	1614	0	1604	1696	1456	1557	1606	0	1645	1611	0
Flt Permitted	0.240			0.445			0.371			0.194		
Satd. Flow (perm)	418	1614	0	751	1696	1456	608	1606	0	336	1611	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24				168		154			177	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			370			464			336	
Travel Time (s)		14.1			6.3			12.7			6.5	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	2%	6%	4%	1%	4%	3%	3%	0%	0%	0%	0%	2%
Adj. Flow (vph)	140	238	90	260	514	92	173	119	351	176	61	207
Shared Lane Traffic (%)												
Lane Group Flow (vph)	140	328	0	260	514	92	173	470	0	176	268	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	34	34		34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40		40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0		3.0	10.0	10.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	10.6	39.6		9.6	16.6	16.6	10.5	9.5		9.5	9.5	
Total Split (s)	13.3	39.1		13.3	39.1	39.1	12.2	25.0		12.2	25.4	
Total Split (%)	14.8%	43.4%		14.8%	43.4%	43.4%	13.6%	27.8%		13.6%	28.2%	
Maximum Green (s)	7.0	32.7		7.0	32.7	32.7	7.0	19.6		7.0	20.0	
Yellow Time (s)	3.0	4.4		3.0	4.4	4.4	3.0	3.0		3.0	3.0	
All-Red Time (s)	3.3	2.0		3.3	2.0	2.0	2.2	2.4		2.2	2.4	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	5.3	5.4		5.3	5.4	5.4	4.2	4.4		4.2	4.4	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0		3.0	6.0	6.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0		0.0	25.0	25.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0		0.0	13.0	13.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		26.0			26.0	26.0		17.0			17.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	42.1	34.1		42.3	34.2	34.2	28.8	20.6		28.8	20.6	
Actuated g/C Ratio	0.47	0.38		0.47	0.38	0.38	0.32	0.23		0.32	0.23	
v/c Ratio	0.46	0.52		0.61	0.80	0.14	0.62	0.97		0.79	0.53	
Control Delay	16.4	23.6		12.9	29.0	0.8	32.3	58.4		48.0	15.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	16.4	23.6		12.9	29.0	0.8	32.3	58.4		48.0	15.2	
LOS	B	C		B	C	A	C	E		D	B	
Approach Delay		21.5			21.2			51.4			28.2	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)	31	105		43	214	1	55	150		56	34	
Queue Length 95th (ft)	52	154		42	261	m2	89	#270		#106	79	
Internal Link Dist (ft)		747			290			384			256	
Turn Bay Length (ft)	175			200		185	175			150		
Base Capacity (vph)	305	626		428	643	657	278	492		223	511	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.46	0.52		0.61	0.80	0.14	0.62	0.96		0.79	0.52	

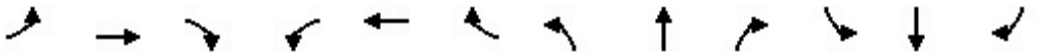
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 8 (9%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 30.5		Intersection LOS: C	
Intersection Capacity Utilization 80.4%		ICU Level of Service D	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

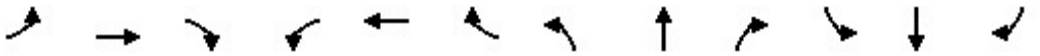
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	521	126	48	675	0	0	0	0	172	0	193
Future Volume (vph)	0	521	126	48	675	0	0	0	0	172	0	193
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	100		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.929	
Flt Protected				0.950							0.977	
Satd. Flow (prot)	0	1731	1485	1621	1748	0	0	0	0	0	1709	0
Flt Permitted				0.253							0.977	
Satd. Flow (perm)	0	1731	1485	432	1748	0	0	0	0	0	1709	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			121								121	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		199			608			453			537	
Travel Time (s)		3.4			10.4			10.3			12.2	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	4%	3%	2%	3%	0%	0%	0%	0%	3%	0%	3%
Adj. Flow (vph)	0	592	143	55	767	0	0	0	0	195	0	219
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	592	143	55	767	0	0	0	0	0	414	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												

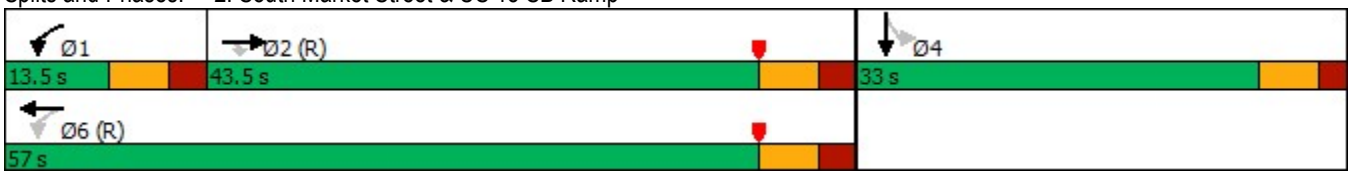


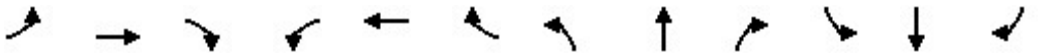
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		43.5	43.5	13.5	57.0					33.0	33.0	
Total Split (%)		48.3%	48.3%	15.0%	63.3%					36.7%	36.7%	
Maximum Green (s)		37.0	37.0	7.0	50.5					27.0	27.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		46.9	46.9	57.5	57.5						22.0	
Actuated g/C Ratio		0.52	0.52	0.64	0.64						0.24	
v/c Ratio		0.66	0.17	0.15	0.69						0.81	
Control Delay		20.0	4.4	3.2	8.2						35.0	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		20.0	4.4	3.2	8.2						35.0	
LOS		C	A	A	A						C	
Approach Delay		17.0			7.9						35.0	
Approach LOS		B			A						C	
Queue Length 50th (ft)		214	9	2	185						126	
Queue Length 95th (ft)		m279	m20	m7	m275						192	
Internal Link Dist (ft)		119			528			373			457	
Turn Bay Length (ft)			125	100								
Base Capacity (vph)		901	831	381	1116						615	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.66	0.17	0.14	0.69						0.67	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 17.0		Intersection LOS: B	
Intersection Capacity Utilization 87.4%		ICU Level of Service E	
Analysis Period (min) 15			

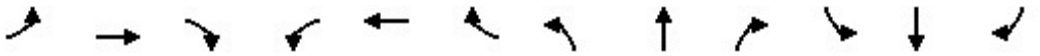
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US 15 SB Ramp





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	484	212	0	0	492	281	202	1	114	0	0	0
Future Volume (vph)	484	212	0	0	492	281	202	1	114	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.952				
Flt Protected	0.950							0.969				
Satd. Flow (prot)	1676	1642	0	0	1765	1479	0	1709	0	0	0	0
Flt Permitted	0.182							0.969				
Satd. Flow (perm)	321	1642	0	0	1765	1479	0	1709	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						309		28				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	6%	0%	0%	2%	0%	6%	0%	1%	0%	0%	0%
Adj. Flow (vph)	532	233	0	0	541	309	222	1	125	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	532	233	0	0	541	309	0	348	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												

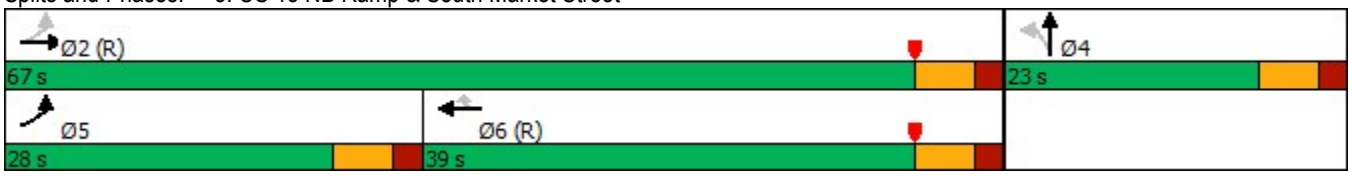


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	28.0	67.0			39.0	39.0	23.0	23.0				
Total Split (%)	31.1%	74.4%			43.3%	43.3%	25.6%	25.6%				
Maximum Green (s)	22.0	61.0			33.0	33.0	17.0	17.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	62.0	62.0			34.4	34.4		18.0				
Actuated g/C Ratio	0.69	0.69			0.38	0.38		0.20				
v/c Ratio	0.95	0.21			0.80	0.41		0.96				
Control Delay	43.9	3.0			35.9	4.2		72.1				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	43.9	3.0			35.9	4.2		72.1				
LOS	D	A			D	A		E				
Approach Delay		31.5			24.3			72.1				
Approach LOS		C			C			E				
Queue Length 50th (ft)	260	25			217	0		146				
Queue Length 95th (ft)	#386	m23			#355	41		#284				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	567	1131			675	757		364				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.94	0.21			0.80	0.41		0.96				

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 50 (56%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 35.6		Intersection LOS: D	
Intersection Capacity Utilization 87.4%		ICU Level of Service E	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

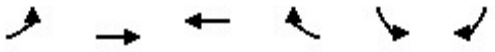
Splits and Phases: 3: US 15 NB Ramp & South Market Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	254	31	175	120	21	119
Future Volume (vph)	254	31	175	120	21	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		0%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.945			
Flt Protected	0.950					0.993
Satd. Flow (prot)	1770	1583	1760	0	0	1825
Flt Permitted	0.950					0.993
Satd. Flow (perm)	1770	1583	1760	0	0	1825
Link Speed (mph)	25		25			35
Link Distance (ft)	189		336			230
Travel Time (s)	5.2		9.2			4.5
Confl. Peds. (#/hr)					121	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	282	34	194	133	23	132
Shared Lane Traffic (%)						
Lane Group Flow (vph)	282	34	327	0	0	155
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.9%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	643	727	144	0	0
Future Volume (vph)	0	643	727	144	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	1900	1844	1552	0	0
Flt Permitted						
Satd. Flow (perm)	0	1900	1844	1552	0	0
Link Speed (mph)		30	40		25	
Link Distance (ft)		370	199		166	
Travel Time (s)		8.4	3.4		4.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	2%	0%	0%
Adj. Flow (vph)	0	714	808	160	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	714	808	160	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	13	50	491	0	91	254
Future Volume (vph)	13	50	491	0	91	254
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-1%		-4%			4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950					0.987
Satd. Flow (prot)	1778	1591	1919	0	0	1802
Flt Permitted	0.950					0.987
Satd. Flow (perm)	1778	1591	1919	0	0	1802
Link Speed (mph)	25		25			25
Link Distance (ft)	240		376			464
Travel Time (s)	6.5		10.3			12.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	1%	2%	2%	2%
Adj. Flow (vph)	14	56	546	0	101	282
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	56	546	0	0	383
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.97	0.97	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 57.6%		ICU Level of Service B	
Analysis Period (min) 15			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	49	442	23	0	267
Future Volume (vph)	0	49	442	23	0	267
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%		1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865	0.993			
Flt Protected						
Satd. Flow (prot)	0	1603	1858	0	0	1872
Flt Permitted						
Satd. Flow (perm)	0	1603	1858	0	0	1872
Link Speed (mph)	25		25			25
Link Distance (ft)	254		129			376
Travel Time (s)	6.9		3.5			10.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	2%	1%	2%	0%	1%
Adj. Flow (vph)	0	54	491	26	0	297
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	54	517	0	0	297
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.7%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	200	76	218	432	77	145	100	295	148	51	174
Future Volume (veh/h)	118	200	76	218	432	77	145	100	295	148	51	174
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1921	1864	1892	1697	1655	1669	1795	1837	1837	1794	1866	1766
Adj Flow Rate, veh/h	140	238	75	260	514	24	173	119	295	176	61	190
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	6	4	1	4	3	3	0	0	0	0	2
Cap, veh/h	324	515	162	463	647	553	329	107	266	232	91	285
Arrive On Green	0.08	0.38	0.38	0.09	0.39	0.39	0.09	0.23	0.23	0.09	0.23	0.23
Sat Flow, veh/h	1829	1359	428	1616	1655	1414	1709	468	1160	1709	399	1243
Grp Volume(v), veh/h	140	0	313	260	514	24	173	0	414	176	0	251
Grp Sat Flow(s),veh/h/ln	1829	0	1787	1616	1655	1414	1709	0	1628	1709	0	1642
Q Serve(g_s), s	4.1	0.0	11.9	8.0	24.7	0.9	6.9	0.0	20.6	7.0	0.0	12.5
Cycle Q Clear(g_c), s	4.1	0.0	11.9	8.0	24.7	0.9	6.9	0.0	20.6	7.0	0.0	12.5
Prop In Lane	1.00		0.24	1.00		1.00	1.00		0.71	1.00		0.76
Lane Grp Cap(c), veh/h	324	0	677	463	647	553	329	0	373	232	0	376
V/C Ratio(X)	0.43	0.00	0.46	0.56	0.79	0.04	0.53	0.00	1.11	0.76	0.00	0.67
Avail Cap(c_a), veh/h	346	0	677	463	647	553	329	0	373	232	0	383
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.1	0.0	21.0	17.4	24.2	17.0	24.3	0.0	34.7	25.7	0.0	31.6
Incr Delay (d2), s/veh	0.9	0.0	2.3	1.6	9.7	0.1	1.5	0.0	80.0	13.5	0.0	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.9	0.0	8.7	5.9	16.0	0.6	5.2	0.0	24.3	6.5	0.0	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.0	0.0	23.3	19.0	33.9	17.1	25.9	0.0	114.7	39.2	0.0	35.9
LnGrp LOS	B	A	C	B	C	B	C	A	F	D	A	D
Approach Vol, veh/h		453			798			587			427	
Approach Delay, s/veh		22.0			28.6			88.5			37.3	
Approach LOS		C			C			F			D	

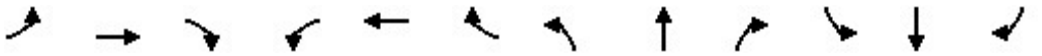
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	39.5	12.2	25.0	12.2	40.6	12.2	25.0
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 7	32.7	* 7	20.0	* 7	32.7	* 7	19.6
Max Q Clear Time (g_c+I1), s	10.0	13.9	8.9	14.5	6.1	26.7	9.0	22.6
Green Ext Time (p_c), s	0.0	2.9	0.0	0.4	0.0	2.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	44.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



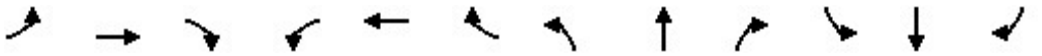
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	521	126	48	675	0	0	0	0	172	0	193
Future Volume (veh/h)	0	521	126	48	675	0	0	0	0	172	0	193
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1744	1758	1772	1758	0				1832	1950	1832
Adj Flow Rate, veh/h	0	592	0	55	767	0				195	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	4	3	2	3	0				3	0	3
Cap, veh/h	0	1113		508	1307	0				259	0	
Arrive On Green	0.00	0.64	0.00	0.04	0.74	0.00				0.14	0.00	0.00
Sat Flow, veh/h	0	1744	1490	1688	1758	0				1857	0	0
Grp Volume(v), veh/h	0	592	0	55	767	0				195	0	0
Grp Sat Flow(s),veh/h/ln	0	1744	1490	1688	1758	0				1857	0	0
Q Serve(g_s), s	0.0	16.7	0.0	0.9	17.9	0.0				9.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	16.7	0.0	0.9	17.9	0.0				9.1	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1113		508	1307	0				259	0	
V/C Ratio(X)	0.00	0.53		0.11	0.59	0.00				0.75	0.00	
Avail Cap(c_a), veh/h	0	1113		584	1307	0				578	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.50	0.50	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.9	0.0	6.1	5.2	0.0				37.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.8	0.0	0.0	1.0	0.0				4.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	9.6	0.0	0.4	7.0	0.0				7.8	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	10.7	0.0	6.2	6.2	0.0				41.6	0.0	6.0
LnGrp LOS	A	B		A	A	A				D	A	A
Approach Vol, veh/h		592	A		822						414	A
Approach Delay, s/veh		10.7			6.2						22.8	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.5	63.0		17.6		72.4
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	37.0		27.0		50.5
Max Q Clear Time (g_c+I1), s	2.9	18.7		11.1		19.9
Green Ext Time (p_c), s	0.0	0.3		0.6		0.5

Intersection Summary		
HCM 6th Ctrl Delay		11.4
HCM 6th LOS		B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	484	212	0	0	492	281	202	1	114	0	0	0
Future Volume (veh/h)	484	212	0	0	492	281	202	1	114	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1772	1716	0	0	1772	1800	1752	1911	1823			
Adj Flow Rate, veh/h	532	233	0	0	541	0	222	1	0			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	6	0	0	2	0	6	0	1			
Cap, veh/h	607	1261	0	0	904		279	1				
Arrive On Green	0.06	0.24	0.00	0.00	0.51	0.00	0.15	0.15	0.00			
Sat Flow, veh/h	1688	1716	0	0	1772	1525	1812	8	0			
Grp Volume(v), veh/h	532	233	0	0	541	0	223	0	0			
Grp Sat Flow(s),veh/h/ln	1688	1716	0	0	1772	1525	1820	0	0			
Q Serve(g_s), s	10.8	9.7	0.0	0.0	19.4	0.0	10.6	0.0	0.0			
Cycle Q Clear(g_c), s	10.8	9.7	0.0	0.0	19.4	0.0	10.6	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	607	1261	0	0	904		280	0				
V/C Ratio(X)	0.88	0.18	0.00	0.00	0.60		0.80	0.00				
Avail Cap(c_a), veh/h	752	1261	0	0	904		364	0				
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.70	0.70	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	14.9	12.7	0.0	0.0	15.6	0.0	36.7	0.0	0.0			
Incr Delay (d2), s/veh	7.1	0.2	0.0	0.0	2.9	0.0	8.9	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	10.9	6.3	0.0	0.0	12.2	0.0	9.1	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	22.0	12.9	0.0	0.0	18.5	0.0	45.6	0.0	6.0			
LnGrp LOS	C	B	A	A	B		D	A	A			
Approach Vol, veh/h		765			541	A		348	A			
Approach Delay, s/veh		19.2			18.5			31.4				
Approach LOS		B			B			C				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		71.1		18.9	20.2	50.9			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		61.0		17.0	22.0	33.0			
Max Q Clear Time (g_c+I1), s		11.7		12.6	12.8	21.4			
Green Ext Time (p_c), s		0.1		0.3	1.4	0.3			

Intersection Summary		
HCM 6th Ctrl Delay		21.5
HCM 6th LOS		C

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	8.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	254	31	175	120	21	119
Future Vol, veh/h	254	31	175	120	21	119
Conflicting Peds, #/hr	0	0	0	0	121	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	282	34	194	133	23	132

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	560	382	0	0	448	0
Stage 1	382	-	-	-	-	-
Stage 2	178	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.3	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	553	704	-	-	842	-
Stage 1	710	-	-	-	-	-
Stage 2	988	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	481	633	-	-	757	-
Mov Cap-2 Maneuver	481	-	-	-	-	-
Stage 1	638	-	-	-	-	-
Stage 2	955	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.3	0	1.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	481	633	757	-
HCM Lane V/C Ratio	-	-	0.587	0.054	0.031	-
HCM Control Delay (s)	-	-	22.6	11	9.9	0
HCM Lane LOS	-	-	C	B	A	A
HCM 95th %tile Q(veh)	-	-	3.7	0.2	0.1	-

Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	50	491	0	91	254
Future Vol, veh/h	13	50	491	0	91	254
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-4	-	-	4
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	1	2	2	2
Mvmt Flow	14	56	546	0	101	282

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1030	546	0	0	546	0
Stage 1	546	-	-	-	-	-
Stage 2	484	-	-	-	-	-
Critical Hdwy	6.22	6.12	-	-	4.3	-
Critical Hdwy Stg 1	6.2	-	-	-	-	-
Critical Hdwy Stg 2	5.22	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	302	575	-	-	778	-
Stage 1	583	-	-	-	-	-
Stage 2	723	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	255	575	-	-	778	-
Mov Cap-2 Maneuver	255	-	-	-	-	-
Stage 1	583	-	-	-	-	-
Stage 2	612	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.6	0	2.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	255	575	778	-
HCM Lane V/C Ratio	-	-	0.057	0.097	0.13	-
HCM Control Delay (s)	-	-	20	11.9	10.3	0
HCM Lane LOS	-	-	C	B	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0.3	0.4	-

Intersection	
Int Delay, s/veh	0.7

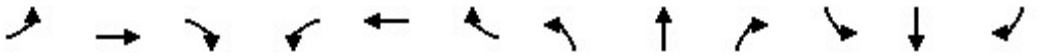
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	49	442	23	0	267
Future Vol, veh/h	0	49	442	23	0	267
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	1	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	1	2	0	1
Mvmt Flow	0	54	491	26	0	297

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	504	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.32	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	591	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	591	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

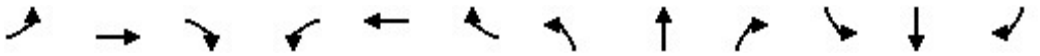
Approach	WB	NB	SB
HCM Control Delay, s	11.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	591	-
HCM Lane V/C Ratio	-	-	0.092	-
HCM Control Delay (s)	-	-	11.7	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.3	-

2027 Horizon Year Build Scenario With Adjacent Development AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	119	206	77	218	463	77	152	100	295	148	51	177
Future Volume (vph)	119	206	77	218	463	77	152	100	295	148	51	177
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		225	200		185	175		0	150		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	50			75			100			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.888			0.884	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1653	1674	1451	1604	1696	1456	1557	1606	0	1645	1611	0
Flt Permitted	0.193			0.542			0.358			0.194		
Satd. Flow (perm)	336	1674	1451	915	1696	1456	587	1606	0	336	1611	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			101			101		155			180	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			370			464			336	
Travel Time (s)		14.1			6.3			12.7			6.5	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	2%	6%	4%	1%	4%	3%	3%	0%	0%	0%	0%	2%
Adj. Flow (vph)	142	245	92	260	551	92	181	119	351	176	61	211
Shared Lane Traffic (%)												
Lane Group Flow (vph)	142	245	92	260	551	92	181	470	0	176	272	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	34	34	34	34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6	-6	-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6	-6	-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40	40	40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	3	1	6	7	3	8		7	4	
Switch Phase												

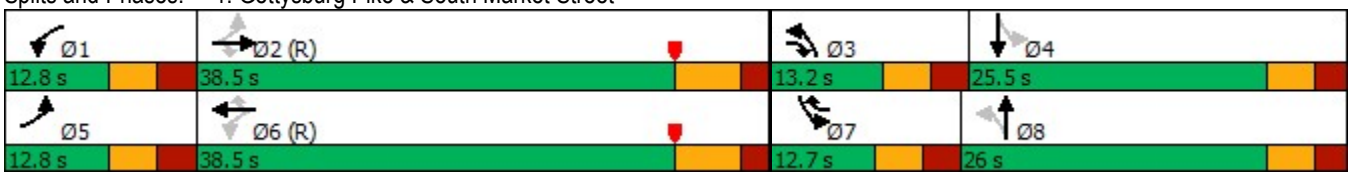


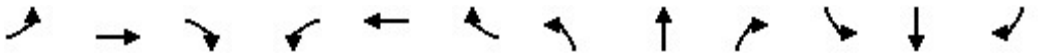
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0	3.0	3.0	10.0	3.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	10.6	39.6	10.5	9.6	16.6	9.5	10.5	9.5		9.5	9.5	
Total Split (s)	12.8	38.5	13.2	12.8	38.5	12.7	13.2	26.0		12.7	25.5	
Total Split (%)	14.2%	42.8%	14.7%	14.2%	42.8%	14.1%	14.7%	28.9%		14.1%	28.3%	
Maximum Green (s)	7.0	32.1	7.5	7.0	32.1	7.0	7.5	20.5		7.0	20.0	
Yellow Time (s)	3.2	4.4	3.2	3.2	4.4	3.2	3.2	3.2		3.2	3.2	
All-Red Time (s)	2.6	2.0	2.5	2.6	2.0	2.5	2.5	2.3		2.5	2.3	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.8	5.4	4.7	4.8	5.4	4.7	4.7	4.5		4.7	4.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0	3.0	3.0	6.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0	0.0	0.0	13.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max	None	None	C-Max	None	None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			22.0			22.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	42.0	33.5	47.4	42.1	33.5	46.9	29.4	21.1		28.4	20.6	
Actuated g/C Ratio	0.47	0.37	0.53	0.47	0.37	0.52	0.33	0.23		0.32	0.23	
v/c Ratio	0.52	0.39	0.11	0.53	0.87	0.11	0.64	0.95		0.79	0.54	
Control Delay	19.0	23.3	2.4	10.6	33.8	1.8	32.3	53.9		48.0	15.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	19.0	23.3	2.4	10.6	33.8	1.8	32.3	53.9		48.0	15.1	
LOS	B	C	A	B	C	A	C	D		D	B	
Approach Delay		18.0			23.9			47.9			28.0	
Approach LOS		B			C			D			C	
Queue Length 50th (ft)	32	81	0	39	221	5	57	147		55	34	
Queue Length 95th (ft)	54	122	13	m53	#339	m6	91	#262		#106	80	
Internal Link Dist (ft)		747			290			384			256	
Turn Bay Length (ft)	175		225	200		185	175			150		
Base Capacity (vph)	273	622	811	489	631	807	283	501		222	513	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.52	0.39	0.11	0.53	0.87	0.11	0.64	0.94		0.79	0.53	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 72 (80%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 29.8		Intersection LOS: C	
Intersection Capacity Utilization 82.2%		ICU Level of Service E	
Analysis Period (min) 15			

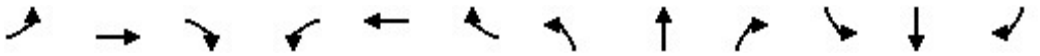
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	526	127	48	699	0	0	0	0	172	0	200
Future Volume (vph)	0	526	127	48	699	0	0	0	0	172	0	200
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	100		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.927	
Flt Protected				0.950							0.977	
Satd. Flow (prot)	0	1731	1485	1621	1748	0	0	0	0	0	1705	0
Flt Permitted				0.252							0.977	
Satd. Flow (perm)	0	1731	1485	430	1748	0	0	0	0	0	1705	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			128								121	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		199			608			453			537	
Travel Time (s)		3.4			10.4			10.3			12.2	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	4%	3%	2%	3%	0%	0%	0%	0%	3%	0%	3%
Adj. Flow (vph)	0	598	144	55	794	0	0	0	0	195	0	227
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	598	144	55	794	0	0	0	0	0	422	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												

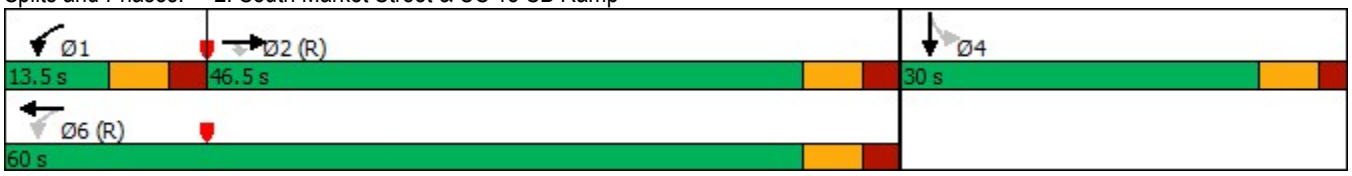


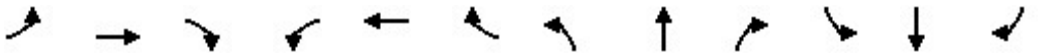
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		46.5	46.5	13.5	60.0					30.0	30.0	
Total Split (%)		51.7%	51.7%	15.0%	66.7%					33.3%	33.3%	
Maximum Green (s)		40.0	40.0	7.0	53.5					24.0	24.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		47.4	47.4	57.9	57.9						21.6	
Actuated g/C Ratio		0.53	0.53	0.64	0.64						0.24	
v/c Ratio		0.66	0.17	0.15	0.71						0.84	
Control Delay		17.8	3.1	1.6	4.9						38.7	
Queue Delay		0.0	0.0	0.0	0.2						0.0	
Total Delay		17.8	3.1	1.6	5.1						38.7	
LOS		B	A	A	A						D	
Approach Delay		15.0			4.9						38.7	
Approach LOS		B			A						D	
Queue Length 50th (ft)		210	10	1	12						129	
Queue Length 95th (ft)		m255	m17	m1	m13						208	
Internal Link Dist (ft)		119			528			373			457	
Turn Bay Length (ft)			125	100								
Base Capacity (vph)		910	842	382	1124						561	
Starvation Cap Reductn		0	0	0	36						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.66	0.17	0.14	0.73						0.75	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 26 (29%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 15.7		Intersection LOS: B	
Intersection Capacity Utilization 89.0%		ICU Level of Service E	
Analysis Period (min) 15			

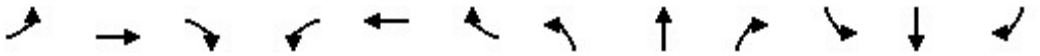
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US 15 SB Ramp





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	488	213	0	0	509	281	209	1	114	0	0	0
Future Volume (vph)	488	213	0	0	509	281	209	1	114	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.953				
Flt Protected	0.950							0.969				
Satd. Flow (prot)	1676	1642	0	0	1765	1479	0	1710	0	0	0	0
Flt Permitted	0.134							0.969				
Satd. Flow (perm)	236	1642	0	0	1765	1479	0	1710	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						309		27				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	6%	0%	0%	2%	0%	6%	0%	1%	0%	0%	0%
Adj. Flow (vph)	536	234	0	0	559	309	230	1	125	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	536	234	0	0	559	309	0	356	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												



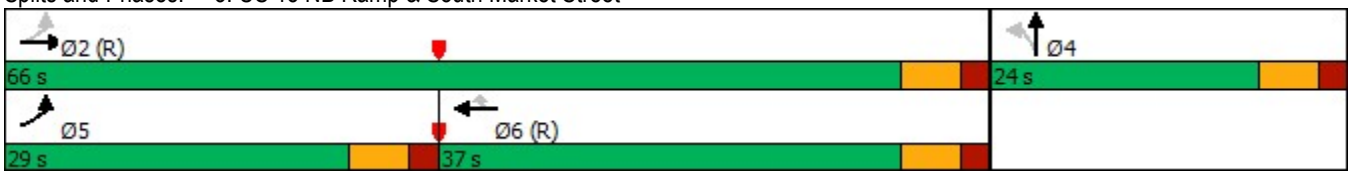
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	29.0	66.0			37.0	37.0	24.0	24.0				
Total Split (%)	32.2%	73.3%			41.1%	41.1%	26.7%	26.7%				
Maximum Green (s)	23.0	60.0			31.0	31.0	18.0	18.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	61.0	61.0			32.0	32.0		19.0				
Actuated g/C Ratio	0.68	0.68			0.36	0.36		0.21				
v/c Ratio	0.99	0.21			0.89	0.43		0.93				
Control Delay	56.1	3.8			46.3	4.5		65.9				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	56.1	3.8			46.3	4.5		65.9				
LOS	E	A			D	A		E				
Approach Delay		40.2			31.4			65.9				
Approach LOS		D			C			E				
Queue Length 50th (ft)	263	30			237	0		149				
Queue Length 95th (ft)	#353	m30			#393	43		#284				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	543	1112			627	725		382				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.99	0.21			0.89	0.43		0.93				

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 88 (98%), Referenced to phase 2:EBTL and 6:WBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay: 41.0		Intersection LOS: D	
Intersection Capacity Utilization 89.0%		ICU Level of Service E	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

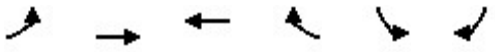
Splits and Phases: 3: US 15 NB Ramp & South Market Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	254	31	176	120	21	121
Future Volume (vph)	254	31	176	120	21	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		0%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.945			
Flt Protected	0.950					0.993
Satd. Flow (prot)	1770	1583	1760	0	0	1825
Flt Permitted	0.950					0.993
Satd. Flow (perm)	1770	1583	1760	0	0	1825
Link Speed (mph)	25		25			35
Link Distance (ft)	189		336			230
Travel Time (s)	5.2		9.2			4.5
Confl. Peds. (#/hr)					121	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	282	34	196	133	23	134
Shared Lane Traffic (%)						
Lane Group Flow (vph)	282	34	329	0	0	157
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 45.0%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	649	758	144	0	0
Future Volume (vph)	0	649	758	144	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	1900	1844	1552	0	0
Flt Permitted						
Satd. Flow (perm)	0	1900	1844	1552	0	0
Link Speed (mph)		30	40		25	
Link Distance (ft)		370	199		166	
Travel Time (s)		8.4	3.4		4.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	2%	0%	0%
Adj. Flow (vph)	0	721	842	160	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	721	842	160	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	13	50	498	0	91	256
Future Volume (vph)	13	50	498	0	91	256
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-1%		-4%			4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950					0.987
Satd. Flow (prot)	1778	1591	1919	0	0	1802
Flt Permitted	0.950					0.987
Satd. Flow (perm)	1778	1591	1919	0	0	1802
Link Speed (mph)	25		25			25
Link Distance (ft)	240		376			464
Travel Time (s)	6.5		10.3			12.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	1%	2%	2%	2%
Adj. Flow (vph)	14	56	553	0	101	284
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	56	553	0	0	385
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.97	0.97	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	49	449	23	0	269
Future Volume (vph)	0	49	449	23	0	269
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%		1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865	0.993			
Flt Protected						
Satd. Flow (prot)	0	1603	1858	0	0	1872
Flt Permitted						
Satd. Flow (perm)	0	1603	1858	0	0	1872
Link Speed (mph)	25		25			25
Link Distance (ft)	254		129			376
Travel Time (s)	6.9		3.5			10.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	2%	1%	2%	0%	1%
Adj. Flow (vph)	0	54	499	26	0	299
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	54	525	0	0	299
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	35.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	206	77	218	463	77	152	100	295	148	51	177
Future Volume (veh/h)	119	206	77	218	463	77	152	100	295	148	51	177
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1921	1864	1892	1697	1655	1669	1795	1837	1837	1794	1866	1766
Adj Flow Rate, veh/h	142	245	77	260	551	24	181	119	295	176	61	194
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	6	4	1	4	3	3	0	0	0	0	2
Cap, veh/h	282	685	741	485	626	661	341	112	277	232	92	291
Arrive On Green	0.08	0.37	0.37	0.09	0.38	0.38	0.09	0.24	0.24	0.09	0.23	0.23
Sat Flow, veh/h	1829	1864	1604	1616	1655	1414	1709	468	1160	1709	393	1249
Grp Volume(v), veh/h	142	245	77	260	551	24	181	0	414	176	0	255
Grp Sat Flow(s),veh/h/ln	1829	1864	1604	1616	1655	1414	1709	0	1628	1709	0	1641
Q Serve(g_s), s	4.2	8.6	2.4	8.0	27.9	0.8	7.2	0.0	21.5	7.0	0.0	12.7
Cycle Q Clear(g_c), s	4.2	8.6	2.4	8.0	27.9	0.8	7.2	0.0	21.5	7.0	0.0	12.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.71	1.00		0.76
Lane Grp Cap(c), veh/h	282	685	741	485	626	661	341	0	389	232	0	383
V/C Ratio(X)	0.50	0.36	0.10	0.54	0.88	0.04	0.53	0.00	1.06	0.76	0.00	0.67
Avail Cap(c_a), veh/h	301	685	741	485	626	661	341	0	389	232	0	383
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.8	20.7	13.7	17.4	26.1	13.0	23.8	0.0	34.3	25.5	0.0	31.3
Incr Delay (d2), s/veh	1.4	1.5	0.3	1.2	16.2	0.1	1.6	0.0	63.7	13.5	0.0	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.1	6.8	1.7	6.0	18.8	0.5	5.4	0.0	22.4	6.4	0.0	9.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.2	22.2	14.0	18.6	42.3	13.1	25.4	0.0	98.0	39.0	0.0	35.6
LnGrp LOS	C	C	B	B	D	B	C	A	F	D	A	D
Approach Vol, veh/h		464			835			595			431	
Approach Delay, s/veh		20.5			34.1			75.9			37.0	
Approach LOS		C			C			E			D	

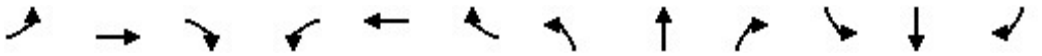
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	38.5	13.2	25.5	11.8	39.5	12.7	26.0
Change Period (Y+Rc), s	* 5.8	6.4	* 5.7	5.5	* 5.8	6.4	* 5.7	5.5
Max Green Setting (Gmax), s	* 7	32.1	* 7.5	20.0	* 7	32.1	* 7	20.5
Max Q Clear Time (g_c+I1), s	10.0	10.6	9.2	14.7	6.2	29.9	9.0	23.5
Green Ext Time (p_c), s	0.0	3.1	0.0	0.4	0.0	1.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	42.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



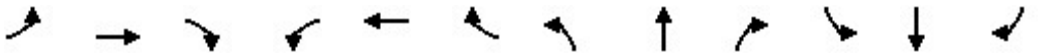
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	526	127	48	699	0	0	0	0	172	0	200
Future Volume (veh/h)	0	526	127	48	699	0	0	0	0	172	0	200
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1744	1758	1772	1758	0				1832	1950	1832
Adj Flow Rate, veh/h	0	598	0	55	794	0				195	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	4	3	2	3	0				3	0	3
Cap, veh/h	0	1114		505	1308	0				258	0	
Arrive On Green	0.00	0.64	0.00	0.03	0.50	0.00				0.14	0.00	0.00
Sat Flow, veh/h	0	1744	1490	1688	1758	0				1857	0	0
Grp Volume(v), veh/h	0	598	0	55	794	0				195	0	0
Grp Sat Flow(s),veh/h/ln	0	1744	1490	1688	1758	0				1857	0	0
Q Serve(g_s), s	0.0	17.0	0.0	0.9	29.2	0.0				9.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	17.0	0.0	0.9	29.2	0.0				9.1	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1114		505	1308	0				258	0	
V/C Ratio(X)	0.00	0.54		0.11	0.61	0.00				0.76	0.00	
Avail Cap(c_a), veh/h	0	1114		580	1308	0				516	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.33	0.33	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.9	0.0	6.3	13.1	0.0				37.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.9	0.0	0.0	0.7	0.0				4.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	9.7	0.0	0.4	15.3	0.0				7.8	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	10.8	0.0	6.3	13.8	0.0				41.7	0.0	6.0
LnGrp LOS	A	B		A	B	A				D	A	A
Approach Vol, veh/h		598	A		849						422	A
Approach Delay, s/veh		10.8			13.3						22.5	
Approach LOS		B			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.5	63.0		17.5		72.5
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	40.0		24.0		53.5
Max Q Clear Time (g_c+I1), s	2.9	19.0		11.1		31.2
Green Ext Time (p_c), s	0.0	0.3		0.5		0.5

Intersection Summary	
HCM 6th Ctrl Delay	14.6
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	488	213	0	0	509	281	209	1	114	0	0	0
Future Volume (veh/h)	488	213	0	0	509	281	209	1	114	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1772	1716	0	0	1772	1800	1752	1911	1823			
Adj Flow Rate, veh/h	536	234	0	0	559	0	230	1	0			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	6	0	0	2	0	6	0	1			
Cap, veh/h	607	1253	0	0	832		288	1				
Arrive On Green	0.07	0.24	0.00	0.00	0.47	0.00	0.16	0.16	0.00			
Sat Flow, veh/h	1688	1716	0	0	1772	1525	1812	8	0			
Grp Volume(v), veh/h	536	234	0	0	559	0	231	0	0			
Grp Sat Flow(s),veh/h/ln	1688	1716	0	0	1772	1525	1820	0	0			
Q Serve(g_s), s	14.2	9.8	0.0	0.0	22.0	0.0	11.0	0.0	0.0			
Cycle Q Clear(g_c), s	14.2	9.8	0.0	0.0	22.0	0.0	11.0	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	607	1253	0	0	832		289	0				
V/C Ratio(X)	0.88	0.19	0.00	0.00	0.67		0.80	0.00				
Avail Cap(c_a), veh/h	712	1253	0	0	832		384	0				
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.70	0.70	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	19.8	12.9	0.0	0.0	18.5	0.0	36.5	0.0	0.0			
Incr Delay (d2), s/veh	8.3	0.2	0.0	0.0	4.3	0.0	8.5	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	11.1	6.4	0.0	0.0	14.0	0.0	9.3	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	28.1	13.2	0.0	0.0	22.8	0.0	44.9	0.0	6.0			
LnGrp LOS	C	B	A	A	C		D	A	A			
Approach Vol, veh/h		770			559	A		356	A			
Approach Delay, s/veh		23.5			22.8			31.3				
Approach LOS		C			C			C				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		70.7		19.3	23.4	47.3			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		60.0		18.0	23.0	31.0			
Max Q Clear Time (g_c+I1), s		11.8		13.0	16.2	24.0			
Green Ext Time (p_c), s		0.1		0.3	1.2	0.2			

Intersection Summary									
HCM 6th Ctrl Delay		24.9							
HCM 6th LOS		C							

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	8.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	254	31	176	120	21	121
Future Vol, veh/h	254	31	176	120	21	121
Conflicting Peds, #/hr	0	0	0	0	121	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	282	34	196	133	23	134

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	564	384	0	0	450	0
Stage 1	384	-	-	-	-	-
Stage 2	180	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.3	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	550	702	-	-	841	-
Stage 1	708	-	-	-	-	-
Stage 2	985	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	478	631	-	-	756	-
Mov Cap-2 Maneuver	478	-	-	-	-	-
Stage 1	636	-	-	-	-	-
Stage 2	952	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.5	0	1.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	478	631	756	-
HCM Lane V/C Ratio	-	-	0.59	0.055	0.031	-
HCM Control Delay (s)	-	-	22.8	11	9.9	0
HCM Lane LOS	-	-	C	B	A	A
HCM 95th %tile Q(veh)	-	-	3.8	0.2	0.1	-

Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	50	498	0	91	256
Future Vol, veh/h	13	50	498	0	91	256
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-4	-	-	4
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	1	2	2	2
Mvmt Flow	14	56	553	0	101	284

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1039	553	0	0	553	0
Stage 1	553	-	-	-	-	-
Stage 2	486	-	-	-	-	-
Critical Hdwy	6.22	6.12	-	-	4.3	-
Critical Hdwy Stg 1	6.2	-	-	-	-	-
Critical Hdwy Stg 2	5.22	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	298	570	-	-	774	-
Stage 1	578	-	-	-	-	-
Stage 2	721	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	252	570	-	-	774	-
Mov Cap-2 Maneuver	252	-	-	-	-	-
Stage 1	578	-	-	-	-	-
Stage 2	609	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.7	0	2.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	252	570	774	-
HCM Lane V/C Ratio	-	-	0.057	0.097	0.131	-
HCM Control Delay (s)	-	-	20.2	12	10.3	0
HCM Lane LOS	-	-	C	B	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0.3	0.4	-

Intersection	
Int Delay, s/veh	0.7

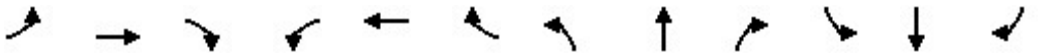
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	49	449	23	0	269
Future Vol, veh/h	0	49	449	23	0	269
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	1	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	1	2	0	1
Mvmt Flow	0	54	499	26	0	299

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	512	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.32	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	585	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	585	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

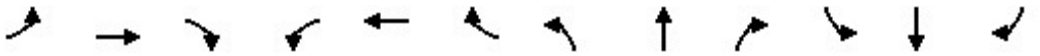
Approach	WB	NB	SB
HCM Control Delay, s	11.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	585	-
HCM Lane V/C Ratio	-	-	0.093	-
HCM Control Delay (s)	-	-	11.8	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.3	-

2027 Horizon Year Mitigation Scenario
AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	119	206	77	218	463	77	152	100	295	148	51	177
Future Volume (vph)	119	206	77	218	463	77	152	100	295	148	51	177
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		225	200		185	175		200	260		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	50			75			100			0		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.959				0.850			0.850		0.884	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1653	3067	0	1604	1696	1456	1557	1809	1538	1645	1611	0
Flt Permitted	0.308			0.476			0.294			0.681		
Satd. Flow (perm)	536	3067	0	804	1696	1456	482	1809	1538	1179	1611	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		64				98			351		171	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			370			464			336	
Travel Time (s)		14.1			6.3			12.7			6.5	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	2%	6%	4%	1%	4%	3%	3%	0%	0%	0%	0%	2%
Adj. Flow (vph)	142	245	92	260	551	92	181	119	351	176	61	211
Shared Lane Traffic (%)												
Lane Group Flow (vph)	142	337	0	260	551	92	181	119	351	176	272	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template									Right			
Leading Detector (ft)	34	34		34	34	34	39	39	39	34	34	
Trailing Detector (ft)	-6	-6		-6	-6	-6	-6	-6	-6	-6	-6	
Detector 1 Position(ft)	-6	-6		-6	-6	-6	-6	-6	-6	-6	-6	
Detector 1 Size(ft)	40	40		40	40	40	45	45	45	40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6	7	3	8	1	7	4	
Permitted Phases	2			6		6	8		8	4		
Detector Phase	5	2		1	6	7	3	8	1	7	4	
Switch Phase												



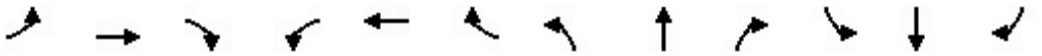
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.8	22.4		9.8	26.5	9.7	9.8	21.5	9.8	9.7	21.5	
Total Split (s)	12.7	34.1		19.4	40.8	13.8	15.0	22.7	19.4	13.8	21.5	
Total Split (%)	14.1%	37.9%		21.6%	45.3%	15.3%	16.7%	25.2%	21.6%	15.3%	23.9%	
Maximum Green (s)	7.0	27.7		13.7	34.4	8.2	9.4	17.3	13.7	8.2	16.1	
Yellow Time (s)	3.1	4.4		3.1	4.4	3.1	3.1	3.1	3.1	3.1	3.1	
All-Red Time (s)	2.6	2.0		2.6	2.0	2.5	2.5	2.3	2.6	2.5	2.3	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.7	5.4		4.7	5.4	4.6	4.6	4.4	4.7	4.6	4.4	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0		3.0	6.0	3.0	3.0	3.0	3.0	3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	25.0		0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	13.0		0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	None	None	None	None	None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			22.0			22.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	43.7	35.1		52.7	40.2	54.8	23.8	13.6	31.0	21.4	12.4	
Actuated g/C Ratio	0.49	0.39		0.59	0.45	0.61	0.26	0.15	0.34	0.24	0.14	
v/c Ratio	0.40	0.27		0.44	0.73	0.10	0.72	0.44	0.46	0.54	0.74	
Control Delay	13.5	17.1		6.5	20.9	1.2	41.6	38.6	4.1	30.6	26.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	13.5	17.1		6.5	20.9	1.2	41.6	38.6	4.1	30.6	26.3	
LOS	B	B		A	C	A	D	D	A	C	C	
Approach Delay		16.0			14.7			20.8			28.0	
Approach LOS		B			B			C			C	
Queue Length 50th (ft)	27	44		26	208	3	64	50	0	62	43	
Queue Length 95th (ft)	51	70		m42	279	m5	95	80	30	91	90	
Internal Link Dist (ft)		747			290			384			256	
Turn Bay Length (ft)	175			200		185	175		200	260		
Base Capacity (vph)	360	1235		608	758	925	251	367	782	327	444	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.39	0.27		0.43	0.73	0.10	0.72	0.32	0.45	0.54	0.61	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 82 (91%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 19.0		Intersection LOS: B	
Intersection Capacity Utilization 71.7%		ICU Level of Service C	
Analysis Period (min) 15			

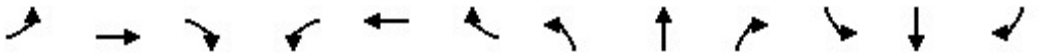
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





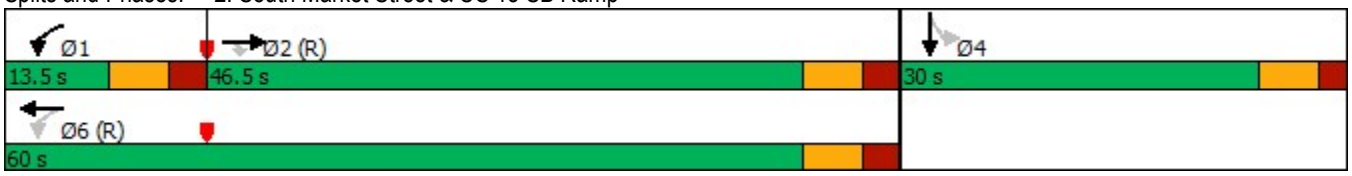
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	526	127	48	699	0	0	0	0	172	0	200
Future Volume (vph)	0	526	127	48	699	0	0	0	0	172	0	200
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	100		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	*0.71	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.927	
Flt Protected				0.950							0.977	
Satd. Flow (prot)	0	2458	1485	1621	1748	0	0	0	0	0	1705	0
Flt Permitted				0.258							0.977	
Satd. Flow (perm)	0	2458	1485	440	1748	0	0	0	0	0	1705	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			144								121	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		199			608			453			537	
Travel Time (s)		3.4			10.4			10.3			12.2	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	4%	3%	2%	3%	0%	0%	0%	0%	3%	0%	3%
Adj. Flow (vph)	0	598	144	55	794	0	0	0	0	195	0	227
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	598	144	55	794	0	0	0	0	0	422	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												

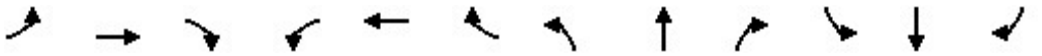


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		46.5	46.5	13.5	60.0					30.0	30.0	
Total Split (%)		51.7%	51.7%	15.0%	66.7%					33.3%	33.3%	
Maximum Green (s)		40.0	40.0	7.0	53.5					24.0	24.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		47.4	47.4	57.9	57.9						21.6	
Actuated g/C Ratio		0.53	0.53	0.64	0.64						0.24	
v/c Ratio		0.46	0.17	0.14	0.71						0.84	
Control Delay		15.5	3.2	1.9	6.0						38.7	
Queue Delay		0.0	0.0	0.0	0.2						0.0	
Total Delay		15.5	3.2	1.9	6.2						38.7	
LOS		B	A	A	A						D	
Approach Delay		13.1			5.9						38.7	
Approach LOS		B			A						D	
Queue Length 50th (ft)		124	2	1	12						129	
Queue Length 95th (ft)		169	28	m1	m83						208	
Internal Link Dist (ft)		119			528			373			457	
Turn Bay Length (ft)			125	100								
Base Capacity (vph)		1293	849	388	1124						561	
Starvation Cap Reductn		0	0	0	36						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.46	0.17	0.14	0.73						0.75	

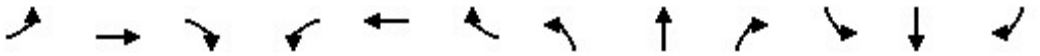
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 36 (40%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 15.5		Intersection LOS: B	
Intersection Capacity Utilization 86.0%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 2: South Market Street & US 15 SB Ramp





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	488	213	0	0	509	281	209	1	114	0	0	0
Future Volume (vph)	488	213	0	0	509	281	209	1	114	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	0		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	0			25			25			25		
Lane Util. Factor	*1.00	*1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.953				
Flt Protected	0.950							0.969				
Satd. Flow (prot)	1676	1642	0	0	1765	1479	0	1710	0	0	0	0
Flt Permitted	0.134							0.969				
Satd. Flow (perm)	236	1642	0	0	1765	1479	0	1710	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						309		27				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	6%	0%	0%	2%	0%	6%	0%	1%	0%	0%	0%
Adj. Flow (vph)	536	234	0	0	559	309	230	1	125	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	536	234	0	0	559	309	0	356	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		23			23			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	29.0	66.0			37.0	37.0	24.0	24.0				
Total Split (%)	32.2%	73.3%			41.1%	41.1%	26.7%	26.7%				
Maximum Green (s)	23.0	60.0			31.0	31.0	18.0	18.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	61.0	61.0			32.0	32.0		19.0				
Actuated g/C Ratio	0.68	0.68			0.36	0.36		0.21				
v/c Ratio	0.99	0.21			0.89	0.43		0.93				
Control Delay	59.6	4.1			46.3	4.5		65.9				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	59.6	4.1			46.3	4.5		65.9				
LOS	E	A			D	A		E				
Approach Delay		42.7			31.4			65.9				
Approach LOS		D			C			E				
Queue Length 50th (ft)	263	29			237	0		149				
Queue Length 95th (ft)	#352	m38			#393	43		#284				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)						260						
Base Capacity (vph)	543	1112			627	725		382				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.99	0.21			0.89	0.43		0.93				

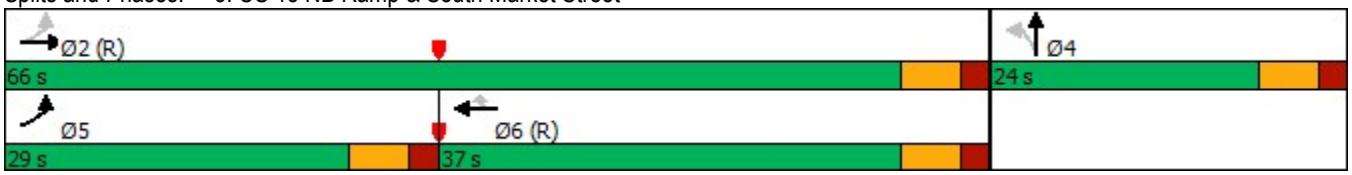
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 6 (7%), Referenced to phase 2:EBTL and 6:WBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay: 41.9		Intersection LOS: D	
Intersection Capacity Utilization 86.0%		ICU Level of Service E	
Analysis Period (min) 15			

* User Entered Value

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

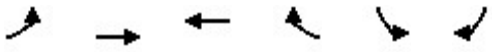
Splits and Phases: 3: US 15 NB Ramp & South Market Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	254	31	176	120	21	121
Future Volume (vph)	254	31	176	120	21	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		0%			1%
Storage Length (ft)	0	0		0	75	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.945			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1760	0	1761	1835
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	1760	0	1761	1835
Link Speed (mph)	25		25			35
Link Distance (ft)	189		336			230
Travel Time (s)	5.2		9.2			4.5
Confl. Peds. (#/hr)					121	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	282	34	196	133	23	134
Shared Lane Traffic (%)						
Lane Group Flow (vph)	282	34	329	0	23	134
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.2%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	649	758	144	0	0
Future Volume (vph)	0	649	758	144	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	4%		0%	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	3610	1844	1552	0	0
Flt Permitted						
Satd. Flow (perm)	0	3610	1844	1552	0	0
Link Speed (mph)		30	40		25	
Link Distance (ft)		370	199		166	
Travel Time (s)		8.4	3.4		4.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	2%	0%	0%
Adj. Flow (vph)	0	721	842	160	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	721	842	160	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		



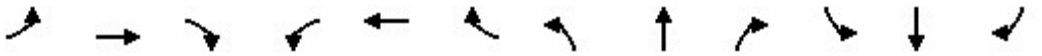
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	13	50	498	0	91	256
Future Volume (vph)	13	50	498	0	91	256
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-1%		-4%			4%
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1778	1591	1919	0	1734	1825
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1778	1591	1919	0	1734	1825
Link Speed (mph)	25		25			25
Link Distance (ft)	240		376			464
Travel Time (s)	6.5		10.3			12.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	1%	2%	2%	2%
Adj. Flow (vph)	14	56	553	0	101	284
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	56	553	0	101	284
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.97	0.97	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	44.6%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	49	449	23	0	269
Future Volume (vph)	0	49	449	23	0	269
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%		1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865	0.993			
Flt Protected						
Satd. Flow (prot)	0	1603	1858	0	0	1872
Flt Permitted						
Satd. Flow (perm)	0	1603	1858	0	0	1872
Link Speed (mph)	25		25			25
Link Distance (ft)	254		129			376
Travel Time (s)	6.9		3.5			10.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	2%	1%	2%	0%	1%
Adj. Flow (vph)	0	54	499	26	0	299
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	54	525	0	0	299
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	35.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	206	77	218	463	77	152	100	295	148	51	177
Future Volume (veh/h)	119	206	77	218	463	77	152	100	295	148	51	177
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1921	1864	1892	1697	1655	1669	1795	1837	1837	1794	1866	1766
Adj Flow Rate, veh/h	142	245	77	260	551	24	181	119	295	176	61	194
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	6	4	1	4	3	3	0	0	0	0	2
Cap, veh/h	323	957	294	570	678	724	314	362	509	387	72	230
Arrive On Green	0.08	0.36	0.36	0.13	0.41	0.41	0.12	0.20	0.20	0.10	0.18	0.18
Sat Flow, veh/h	1829	2668	819	1616	1655	1414	1709	1837	1557	1709	393	1249
Grp Volume(v), veh/h	142	161	161	260	551	24	181	119	295	176	0	255
Grp Sat Flow(s),veh/h/ln	1829	1771	1716	1616	1655	1414	1709	1837	1557	1709	0	1641
Q Serve(g_s), s	4.3	5.8	6.0	8.5	26.5	0.8	7.5	5.0	14.2	7.4	0.0	13.5
Cycle Q Clear(g_c), s	4.3	5.8	6.0	8.5	26.5	0.8	7.5	5.0	14.2	7.4	0.0	13.5
Prop In Lane	1.00		0.48	1.00		1.00	1.00		1.00	1.00		0.76
Lane Grp Cap(c), veh/h	323	635	615	570	678	724	314	362	509	387	0	302
V/C Ratio(X)	0.44	0.25	0.26	0.46	0.81	0.03	0.58	0.33	0.58	0.46	0.00	0.84
Avail Cap(c_a), veh/h	341	635	615	624	678	724	314	374	519	387	0	312
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.6	20.4	20.4	13.4	23.5	10.9	25.9	31.0	25.1	25.7	0.0	35.5
Incr Delay (d2), s/veh	0.9	1.0	1.0	0.6	10.3	0.1	2.6	0.5	1.6	0.8	0.0	18.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.1	4.3	4.4	5.1	16.9	0.4	5.8	4.1	9.2	5.3	0.0	11.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.6	21.3	21.5	13.9	33.8	11.0	28.5	31.6	26.7	26.5	0.0	53.8
LnGrp LOS	B	C	C	B	C	B	C	C	C	C	A	D
Approach Vol, veh/h		464			835			595			431	
Approach Delay, s/veh		20.8			27.0			28.2			42.6	
Approach LOS		C			C			C			D	

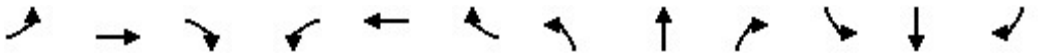
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.4	37.7	15.0	21.0	11.8	42.3	13.8	22.1
Change Period (Y+Rc), s	5.7	6.4	5.6	* 5.4	5.7	6.4	5.6	* 5.4
Max Green Setting (Gmax), s	13.7	27.7	9.4	* 16	7.0	34.4	8.2	* 17
Max Q Clear Time (g_c+I1), s	10.5	8.0	9.5	15.5	6.3	28.5	9.4	16.2
Green Ext Time (p_c), s	0.3	2.9	0.0	0.1	0.0	2.6	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	29.0
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



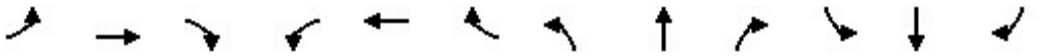
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	526	127	48	699	0	0	0	0	172	0	200
Future Volume (veh/h)	0	526	127	48	699	0	0	0	0	172	0	200
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1744	1758	1772	1758	0				1832	1950	1832
Adj Flow Rate, veh/h	0	598	0	55	794	0				195	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	4	3	2	3	0				3	0	3
Cap, veh/h	0	1582		562	1308	0				258	0	
Arrive On Green	0.00	0.64	0.00	0.03	0.50	0.00				0.14	0.00	0.00
Sat Flow, veh/h	0	2982	1490	1688	1758	0				1857	0	0
Grp Volume(v), veh/h	0	598	0	55	794	0				195	0	0
Grp Sat Flow(s),veh/h/ln	0	1238	1490	1688	1758	0				1857	0	0
Q Serve(g_s), s	0.0	10.3	0.0	0.9	29.2	0.0				9.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	10.3	0.0	0.9	29.2	0.0				9.1	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1582		562	1308	0				258	0	
V/C Ratio(X)	0.00	0.38		0.10	0.61	0.00				0.76	0.00	
Avail Cap(c_a), veh/h	0	1582		637	1308	0				516	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.33	0.33	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	7.7	0.0	5.0	13.1	0.0				37.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.7	0.0				4.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	4.3	0.0	0.4	15.3	0.0				7.8	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	8.4	0.0	5.1	13.8	0.0				41.7	0.0	6.0
LnGrp LOS	A	A		A	B	A				D	A	A
Approach Vol, veh/h		598	A		849						422	A
Approach Delay, s/veh		8.4			13.2						22.5	
Approach LOS		A			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.5	63.0		17.5		72.5
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	40.0		24.0		53.5
Max Q Clear Time (g_c+I1), s	2.9	12.3		11.1		31.2
Green Ext Time (p_c), s	0.0	0.5		0.5		0.5

Intersection Summary	
HCM 6th Ctrl Delay	13.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	488	213	0	0	509	281	209	1	114	0	0	0
Future Volume (veh/h)	488	213	0	0	509	281	209	1	114	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1772	1716	0	0	1772	1800	1752	1911	1823			
Adj Flow Rate, veh/h	536	234	0	0	559	0	230	1	0			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	6	0	0	2	0	6	0	1			
Cap, veh/h	607	1253	0	0	832		288	1				
Arrive On Green	0.07	0.24	0.00	0.00	0.47	0.00	0.16	0.16	0.00			
Sat Flow, veh/h	1688	1716	0	0	1772	1525	1812	8	0			
Grp Volume(v), veh/h	536	234	0	0	559	0	231	0	0			
Grp Sat Flow(s),veh/h/ln	1688	1716	0	0	1772	1525	1820	0	0			
Q Serve(g_s), s	14.2	9.8	0.0	0.0	22.0	0.0	11.0	0.0	0.0			
Cycle Q Clear(g_c), s	14.2	9.8	0.0	0.0	22.0	0.0	11.0	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	607	1253	0	0	832		289	0				
V/C Ratio(X)	0.88	0.19	0.00	0.00	0.67		0.80	0.00				
Avail Cap(c_a), veh/h	712	1253	0	0	832		384	0				
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.88	0.88	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	19.8	12.9	0.0	0.0	18.5	0.0	36.5	0.0	0.0			
Incr Delay (d2), s/veh	10.1	0.3	0.0	0.0	4.3	0.0	8.5	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	12.0	6.7	0.0	0.0	14.0	0.0	9.3	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	29.9	13.2	0.0	0.0	22.8	0.0	44.9	0.0	6.0			
LnGrp LOS	C	B	A	A	C		D	A	A			
Approach Vol, veh/h		770			559	A		356	A			
Approach Delay, s/veh		24.8			22.8			31.3				
Approach LOS		C			C			C				

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	70.7	19.3	23.4	47.3
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	60.0	18.0	23.0	31.0
Max Q Clear Time (g_c+I1), s	11.8	13.0	16.2	24.0
Green Ext Time (p_c), s	0.1	0.3	1.2	0.2

Intersection Summary	
HCM 6th Ctrl Delay	25.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	8.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	254	31	176	120	21	121
Future Vol, veh/h	254	31	176	120	21	121
Conflicting Peds, #/hr	0	0	0	0	121	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	282	34	196	133	23	134

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	564	384	0	0	450	0
Stage 1	384	-	-	-	-	-
Stage 2	180	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.3	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	550	702	-	-	841	-
Stage 1	708	-	-	-	-	-
Stage 2	985	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	480	631	-	-	756	-
Mov Cap-2 Maneuver	480	-	-	-	-	-
Stage 1	636	-	-	-	-	-
Stage 2	955	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.3	0	1.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	480	631	756	-
HCM Lane V/C Ratio	-	-	0.588	0.055	0.031	-
HCM Control Delay (s)	-	-	22.6	11	9.9	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	3.7	0.2	0.1	-

Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	50	498	0	91	256
Future Vol, veh/h	13	50	498	0	91	256
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-4	-	-	4
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	1	2	2	2
Mvmt Flow	14	56	553	0	101	284

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1039	553	0	0	553	0
Stage 1	553	-	-	-	-	-
Stage 2	486	-	-	-	-	-
Critical Hdwy	6.22	6.12	-	-	4.3	-
Critical Hdwy Stg 1	6.2	-	-	-	-	-
Critical Hdwy Stg 2	5.22	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	298	570	-	-	774	-
Stage 1	578	-	-	-	-	-
Stage 2	721	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	259	570	-	-	774	-
Mov Cap-2 Maneuver	259	-	-	-	-	-
Stage 1	578	-	-	-	-	-
Stage 2	627	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.6	0	2.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	259	570	774	-
HCM Lane V/C Ratio	-	-	0.056	0.097	0.131	-
HCM Control Delay (s)	-	-	19.7	12	10.3	-
HCM Lane LOS	-	-	C	B	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0.3	0.4	-

Intersection	
Int Delay, s/veh	0.7

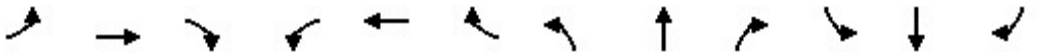
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	49	449	23	0	269
Future Vol, veh/h	0	49	449	23	0	269
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	1	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	1	2	0	1
Mvmt Flow	0	54	499	26	0	299

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	512	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.32	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	585	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	585	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

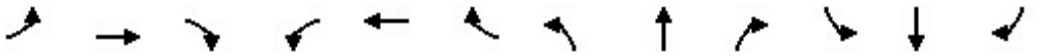
Approach	WB	NB	SB
HCM Control Delay, s	11.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	585	-
HCM Lane V/C Ratio	-	-	0.093	-
HCM Control Delay (s)	-	-	11.8	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.3	-

2020 Baseline Scenario
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	422	63	195	303	127	55	65	169	121	117	35
Future Volume (vph)	46	422	63	195	303	127	55	65	169	121	117	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		0	200		185	175		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	50			75			100			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981				0.850		0.892			0.966	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	1715	0	1620	1747	1485	1604	1579	0	1645	1788	0
Flt Permitted	0.553			0.263			0.590			0.263		
Satd. Flow (perm)	981	1715	0	448	1747	1485	996	1579	0	455	1788	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10				168		126			14	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			569			553			571	
Travel Time (s)		14.1			9.7			15.1			11.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	5%	0%	1%	1%	0%	0%	3%	0%	0%	0%
Adj. Flow (vph)	49	449	67	207	322	135	59	69	180	129	124	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	49	516	0	207	322	135	59	249	0	129	161	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	34	34		34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40		40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0		3.0	10.0	10.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	10.6	39.6		9.6	16.6	16.6	10.5	9.5		9.5	9.5	
Total Split (s)	15.0	42.0		15.0	42.0	42.0	13.0	20.0		13.0	20.0	
Total Split (%)	16.7%	46.7%		16.7%	46.7%	46.7%	14.4%	22.2%		14.4%	22.2%	
Maximum Green (s)	8.7	35.6		8.7	35.6	35.6	7.8	14.6		7.8	14.6	
Yellow Time (s)	3.0	4.4		3.0	4.4	4.4	3.0	3.0		3.0	3.0	
All-Red Time (s)	3.3	2.0		3.3	2.0	2.0	2.2	2.4		2.2	2.4	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	5.3	5.4		5.3	5.4	5.4	4.2	4.4		4.2	4.4	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0		3.0	6.0	6.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0		0.0	25.0	25.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0		0.0	13.0	13.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		26.0			26.0	26.0		17.0			17.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	47.9	40.1		52.5	46.6	46.6	20.9	12.5		22.4	15.2	
Actuated g/C Ratio	0.53	0.45		0.58	0.52	0.52	0.23	0.14		0.25	0.17	
v/c Ratio	0.08	0.67		0.54	0.36	0.16	0.21	0.76		0.57	0.51	
Control Delay	8.7	25.8		14.5	13.8	2.6	24.4	33.3		34.3	37.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	8.7	25.8		14.5	13.8	2.6	24.4	33.3		34.3	37.8	
LOS	A	C		B	B	A	C	C		C	D	
Approach Delay		24.3			11.7			31.6			36.2	
Approach LOS		C			B			C			D	
Queue Length 50th (ft)	9	183		42	68	3	19	52		44	62	
Queue Length 95th (ft)	21	290		m72	m125	m9	42	117		79	111	
Internal Link Dist (ft)		747			489			473			491	
Turn Bay Length (ft)	175			200		185	175			150		
Base Capacity (vph)	619	768		387	904	850	297	377		229	335	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.08	0.67		0.53	0.36	0.16	0.20	0.66		0.56	0.48	

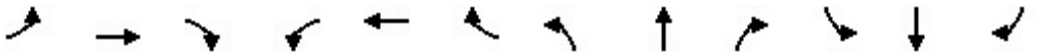
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 59 (66%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 22.9		Intersection LOS: C	
Intersection Capacity Utilization 76.6%		ICU Level of Service D	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	575	143	80	419	0	0	0	0	380	0	193
Future Volume (vph)	0	575	143	80	419	0	0	0	0	380	0	193
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	90		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.955	
Flt Protected				0.950							0.968	
Satd. Flow (prot)	0	1782	1530	1653	1765	0	0	0	0	0	1787	0
Flt Permitted				0.175							0.968	
Satd. Flow (perm)	0	1782	1530	304	1765	0	0	0	0	0	1787	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			129								121	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		569			608			453			537	
Travel Time (s)		9.7			10.4			10.3			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	0%	0%	0%	0%	0%	1%
Adj. Flow (vph)	0	639	159	89	466	0	0	0	0	422	0	214
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	639	159	89	466	0	0	0	0	0	636	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		45.0	45.0	13.0	58.0					32.0	32.0	
Total Split (%)		50.0%	50.0%	14.4%	64.4%					35.6%	35.6%	
Maximum Green (s)		38.5	38.5	6.5	51.5					26.0	26.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		42.1	42.1	52.5	52.5						27.0	
Actuated g/C Ratio		0.47	0.47	0.58	0.58						0.30	
v/c Ratio		0.77	0.20	0.31	0.45						1.03	
Control Delay		25.0	4.2	17.2	9.7						70.0	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		25.0	4.2	17.2	9.7						70.0	
LOS		C	A	B	A						E	
Approach Delay		20.9			10.9						70.0	
Approach LOS		C			B						E	
Queue Length 50th (ft)		248	18	14	115						~269	
Queue Length 95th (ft)		#405	m21	47	m153						#438	
Internal Link Dist (ft)		489			528			373			457	
Turn Bay Length (ft)			125	90								
Base Capacity (vph)		833	784	289	1029						620	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.77	0.20	0.31	0.45						1.03	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.03			
Intersection Signal Delay: 33.8		Intersection LOS: C	
Intersection Capacity Utilization 84.6%		ICU Level of Service E	
Analysis Period (min) 15			

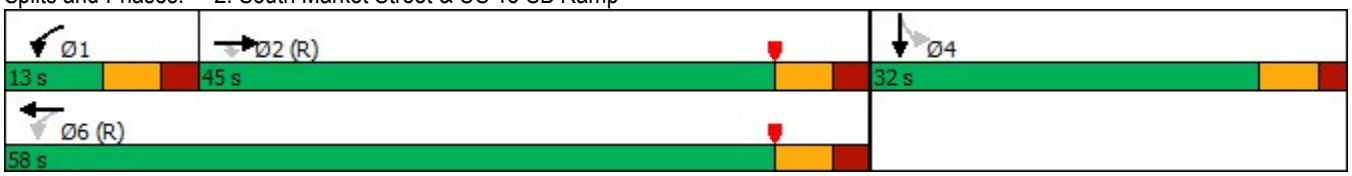
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

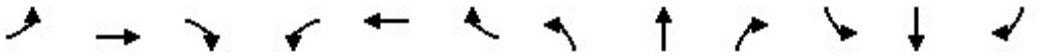
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

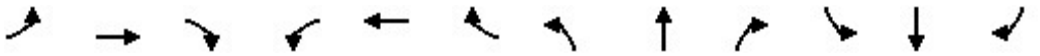
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US 15 SB Ramp





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	542	419	0	0	333	159	174	0	91	0	0	0
Future Volume (vph)	542	419	0	0	333	159	174	0	91	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.954				
Flt Protected	0.950							0.968				
Satd. Flow (prot)	1693	1723	0	0	1765	1464	0	1752	0	0	0	0
Flt Permitted	0.433							0.968				
Satd. Flow (perm)	772	1723	0	0	1765	1464	0	1752	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						185		109				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	0%	0%	2%	1%	1%	0%	3%	0%	0%	0%
Adj. Flow (vph)	630	487	0	0	387	185	202	0	106	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	630	487	0	0	387	185	0	308	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												

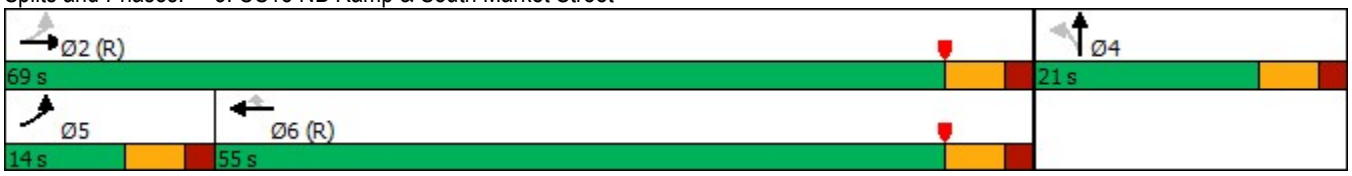


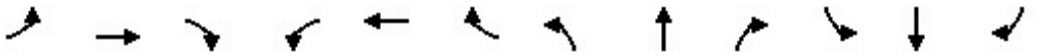
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	14.0	69.0			55.0	55.0	21.0	21.0				
Total Split (%)	15.6%	76.7%			61.1%	61.1%	23.3%	23.3%				
Maximum Green (s)	8.0	63.0			49.0	49.0	15.0	15.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	65.4	65.4			51.4	51.4		14.6				
Actuated g/C Ratio	0.73	0.73			0.57	0.57		0.16				
v/c Ratio	0.96	0.39			0.38	0.20		0.82				
Control Delay	43.5	15.2			12.4	2.1		41.7				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	43.5	15.2			12.4	2.1		41.7				
LOS	D	B			B	A		D				
Approach Delay		31.1			9.1			41.7				
Approach LOS		C			A			D				
Queue Length 50th (ft)	126	173			94	0		87				
Queue Length 95th (ft)	122	m185			135	19		#167				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	653	1251			1007	915		401				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.96	0.39			0.38	0.20		0.77				

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 18 (20%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 26.4		Intersection LOS: C	
Intersection Capacity Utilization 84.6%		ICU Level of Service E	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: US15 NB Ramp & South Market Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	422	63	195	303	127	55	65	169	121	117	35
Future Volume (veh/h)	46	422	63	195	303	127	55	65	169	121	117	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1935	1878	1711	1697	1697	1837	1837	1795	1794	1866	1794
Adj Flow Rate, veh/h	49	449	56	207	322	118	59	69	100	129	124	18
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	1	5	0	1	1	0	0	3	0	0	0
Cap, veh/h	632	783	98	469	888	753	304	91	131	281	279	40
Arrive On Green	0.04	0.46	0.46	0.16	0.87	0.87	0.05	0.13	0.13	0.09	0.17	0.17
Sat Flow, veh/h	1856	1687	210	1629	1697	1438	1750	678	982	1709	1593	231
Grp Volume(v), veh/h	49	0	505	207	322	118	59	0	169	129	0	142
Grp Sat Flow(s),veh/h/ln	1856	0	1897	1629	1697	1438	1750	0	1660	1709	0	1825
Q Serve(g_s), s	1.2	0.0	17.5	5.6	3.1	1.1	2.6	0.0	8.8	5.6	0.0	6.3
Cycle Q Clear(g_c), s	1.2	0.0	17.5	5.6	3.1	1.1	2.6	0.0	8.8	5.6	0.0	6.3
Prop In Lane	1.00		0.11	1.00		1.00	1.00		0.59	1.00		0.13
Lane Grp Cap(c), veh/h	632	0	880	469	888	753	304	0	222	281	0	319
V/C Ratio(X)	0.08	0.00	0.57	0.44	0.36	0.16	0.19	0.00	0.76	0.46	0.00	0.44
Avail Cap(c_a), veh/h	764	0	880	488	888	753	387	0	288	291	0	319
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.89	0.89	0.89	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.5	0.0	17.6	10.9	2.9	2.8	31.0	0.0	37.6	28.6	0.0	33.2
Incr Delay (d2), s/veh	0.1	0.0	2.7	0.6	1.0	0.4	0.3	0.0	8.5	1.2	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	0.0	12.1	2.9	1.8	0.7	2.0	0.0	7.4	4.1	0.0	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.6	0.0	20.3	11.5	3.9	3.2	31.4	0.0	46.1	29.8	0.0	34.2
LnGrp LOS	B	A	C	B	A	A	C	A	D	C	A	C
Approach Vol, veh/h		554			647			228			271	
Approach Delay, s/veh		19.6			6.2			42.3			32.1	
Approach LOS		B			A			D			C	

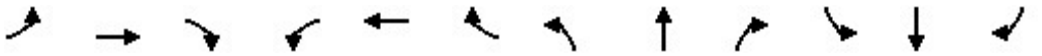
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	47.2	8.7	20.1	8.6	52.5	12.5	16.4
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 8.7	35.6	* 7.8	14.6	* 8.7	35.6	* 7.8	14.6
Max Q Clear Time (g_c+I1), s	7.6	19.5	4.6	8.3	3.2	5.1	7.6	10.8
Green Ext Time (p_c), s	0.1	4.7	0.0	0.2	0.0	5.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	19.5
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	575	143	80	419	0	0	0	0	380	0	193
Future Volume (veh/h)	0	575	143	80	419	0	0	0	0	380	0	193
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1772	0				1875	1950	1860
Adj Flow Rate, veh/h	0	639	0	89	466	0				422	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	1	0	0	2	0				0	0	1
Cap, veh/h	0	914		360	1106	0				481	0	
Arrive On Green	0.00	0.51	0.00	0.10	1.00	0.00				0.26	0.00	0.00
Sat Flow, veh/h	0	1786	1525	1714	1772	0				1857	0	0
Grp Volume(v), veh/h	0	639	0	89	466	0				422	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1772	0				1857	0	0
Q Serve(g_s), s	0.0	24.5	0.0	2.0	0.0	0.0				19.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	24.5	0.0	2.0	0.0	0.0				19.6	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	914		360	1106	0				481	0	
V/C Ratio(X)	0.00	0.70		0.25	0.42	0.00				0.88	0.00	
Avail Cap(c_a), veh/h	0	914		415	1106	0				557	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.71	0.00	0.93	0.93	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	16.7	0.0	11.8	0.0	0.0				32.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.2	0.0	0.3	1.1	0.0				13.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	13.9	0.0	1.2	0.6	0.0				15.6	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	19.9	0.0	12.2	1.1	0.0				45.3	0.0	6.0
LnGrp LOS	A	B		B	A	A				D	A	A
Approach Vol, veh/h		639	A		555						534	A
Approach Delay, s/veh		19.9			2.9						37.1	
Approach LOS		B			A						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.1	51.5		28.3		61.7
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	6.5	38.5		26.0		51.5
Max Q Clear Time (g_c+I1), s	4.0	26.5		21.6		2.0
Green Ext Time (p_c), s	0.0	0.4		0.7		0.3

Intersection Summary	
HCM 6th Ctrl Delay	19.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	542	419	0	0	333	159	174	0	91	0	0	0
Future Volume (veh/h)	542	419	0	0	333	159	174	0	91	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1786	0	0	1772	1786	1823	1911	1795			
Adj Flow Rate, veh/h	630	487	0	0	387	0	202	0	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	1	1	0	0	2	1	1	0	3			
Cap, veh/h	730	1334	0	0	1048		258	0				
Arrive On Green	0.17	1.00	0.00	0.00	0.59	0.00	0.14	0.00	0.00			
Sat Flow, veh/h	1701	1786	0	0	1772	1514	1820	0	0			
Grp Volume(v), veh/h	630	487	0	0	387	0	202	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1786	0	0	1772	1514	1820	0	0			
Q Serve(g_s), s	9.0	0.0	0.0	0.0	10.3	0.0	9.6	0.0	0.0			
Cycle Q Clear(g_c), s	9.0	0.0	0.0	0.0	10.3	0.0	9.6	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	730	1334	0	0	1048		258	0				
V/C Ratio(X)	0.86	0.37	0.00	0.00	0.37		0.78	0.00				
Avail Cap(c_a), veh/h	730	1334	0	0	1048		324	0				
HCM Platoon Ratio	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.55	0.55	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	13.7	0.0	0.0	0.0	9.6	0.0	37.3	0.0	0.0			
Incr Delay (d2), s/veh	6.1	0.4	0.0	0.0	1.0	0.0	9.4	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	10.8	0.3	0.0	0.0	6.6	0.0	8.5	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	19.8	0.4	0.0	0.0	10.6	0.0	46.7	0.0	6.0			
LnGrp LOS	B	A	A	A	B		D	A	A			
Approach Vol, veh/h		1117			387	A		308	A			
Approach Delay, s/veh		11.4			10.6			32.7				
Approach LOS		B			B			C				

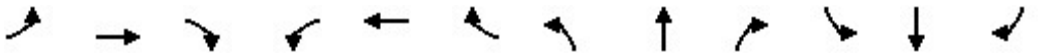
Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		72.2		17.8	14.0	58.2						
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0						
Max Green Setting (Gmax), s		63.0		15.0	8.0	49.0						
Max Q Clear Time (g_c+I1), s		2.0		11.6	11.0	12.3						
Green Ext Time (p_c), s		0.2		0.2	0.0	0.2						

Intersection Summary												
HCM 6th Ctrl Delay			14.8									
HCM 6th LOS			B									

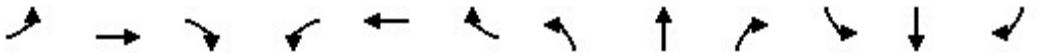
Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

2022 Opening Year No Build Scenario
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	428	64	198	308	129	56	66	172	123	119	36
Future Volume (vph)	47	428	64	198	308	129	56	66	172	123	119	36
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		0	200		185	175		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	50			75			100			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.980				0.850		0.892			0.965	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	1713	0	1620	1747	1485	1604	1579	0	1645	1786	0
Flt Permitted	0.550			0.270			0.600			0.385		
Satd. Flow (perm)	976	1713	0	460	1747	1485	1013	1579	0	667	1786	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12				202		140			16	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			569			553			571	
Travel Time (s)		14.1			9.7			15.1			11.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	5%	0%	1%	1%	0%	0%	3%	0%	0%	0%
Adj. Flow (vph)	50	455	68	211	328	137	60	70	183	131	127	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	50	523	0	211	328	137	60	253	0	131	165	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	34	34		34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40		40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												



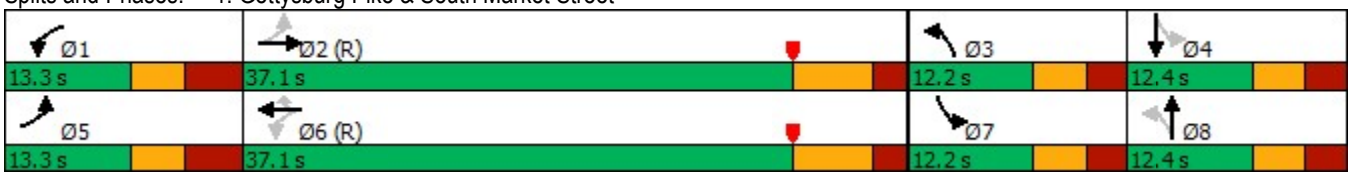
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0		3.0	10.0	10.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	10.6	39.6		9.6	16.6	16.6	10.5	9.5		9.5	9.5	
Total Split (s)	13.3	37.1		13.3	37.1	37.1	12.2	12.4		12.2	12.4	
Total Split (%)	17.7%	49.5%		17.7%	49.5%	49.5%	16.3%	16.5%		16.3%	16.5%	
Maximum Green (s)	7.0	30.7		7.0	30.7	30.7	7.0	7.0		7.0	7.0	
Yellow Time (s)	3.0	4.4		3.0	4.4	4.4	3.0	3.0		3.0	3.0	
All-Red Time (s)	3.3	2.0		3.3	2.0	2.0	2.2	2.4		2.2	2.4	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	5.3	5.4		5.3	5.4	5.4	4.2	4.4		4.2	4.4	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0		3.0	6.0	6.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0		0.0	25.0	25.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0		0.0	13.0	13.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		26.0			26.0	26.0		17.0			17.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	41.8	34.2		44.5	39.6	39.6	14.5	8.0		15.4	10.4	
Actuated g/C Ratio	0.56	0.46		0.59	0.53	0.53	0.19	0.11		0.21	0.14	
v/c Ratio	0.08	0.66		0.54	0.36	0.16	0.23	0.86		0.55	0.63	
Control Delay	6.7	21.7		9.8	5.8	0.3	23.4	45.0		31.6	42.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	6.7	21.7		9.8	5.8	0.3	23.4	45.0		31.6	42.1	
LOS	A	C		A	A	A	C	D		C	D	
Approach Delay		20.4			5.9			40.8			37.5	
Approach LOS		C			A			D			D	
Queue Length 50th (ft)	7	152		11	41	0	17	41		38	55	
Queue Length 95th (ft)	17	244		m33	m58	m0	39	#143		74	#136	
Internal Link Dist (ft)		747			489			473			491	
Turn Bay Length (ft)	175			200		185	175			150		
Base Capacity (vph)	626	788		396	921	878	259	293		241	262	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.08	0.66		0.53	0.36	0.16	0.23	0.86		0.54	0.63	

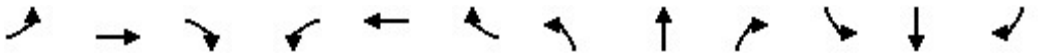
Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 72 (96%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 21.3		Intersection LOS: C	
Intersection Capacity Utilization 77.6%		ICU Level of Service D	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

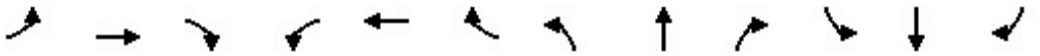
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	584	145	81	425	0	0	0	0	386	0	196
Future Volume (vph)	0	584	145	81	425	0	0	0	0	386	0	196
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	100		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.955	
Flt Protected				0.950							0.968	
Satd. Flow (prot)	0	1782	1530	1653	1765	0	0	0	0	0	1775	0
Flt Permitted				0.118							0.968	
Satd. Flow (perm)	0	1782	1530	205	1765	0	0	0	0	0	1775	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			138								145	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		569			608			453			537	
Travel Time (s)		9.7			10.4			10.3			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	0%	0%	0%	1%	0%	1%
Adj. Flow (vph)	0	649	161	90	472	0	0	0	0	429	0	218
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	649	161	90	472	0	0	0	0	0	647	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	13.5	21.5					10.0	10.0	
Total Split (s)		32.5	32.5	13.5	46.0					29.0	29.0	
Total Split (%)		43.3%	43.3%	18.0%	61.3%					38.7%	38.7%	
Maximum Green (s)		26.0	26.0	7.0	39.5					23.0	23.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		29.8	29.8	40.5	40.5						24.0	
Actuated g/C Ratio		0.40	0.40	0.54	0.54						0.32	
v/c Ratio		0.92	0.23	0.35	0.50						0.97	
Control Delay		37.1	4.3	7.9	9.9						50.5	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		37.1	4.3	7.9	9.9						50.5	
LOS		D	A	A	A						D	
Approach Delay		30.6			9.6						50.5	
Approach LOS		C			A						D	
Queue Length 50th (ft)		~242	0	15	129						190	
Queue Length 95th (ft)		m#395	m11	m18	m178						#365	
Internal Link Dist (ft)		489			528			373			457	
Turn Bay Length (ft)			125	100								
Base Capacity (vph)		707	690	265	953						666	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.92	0.23	0.34	0.50						0.97	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 31.1		Intersection LOS: C	
Intersection Capacity Utilization 85.7%		ICU Level of Service E	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

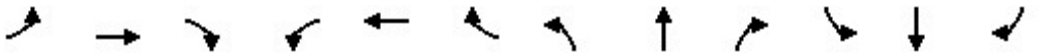
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

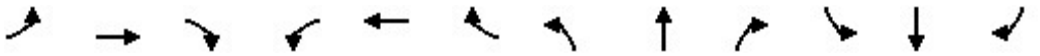
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US 15 SB Ramp





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	550	425	0	0	338	161	177	0	92	0	0	0
Future Volume (vph)	550	425	0	0	338	161	177	0	92	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.954				
Flt Protected	0.950							0.968				
Satd. Flow (prot)	1693	1723	0	0	1765	1464	0	1752	0	0	0	0
Flt Permitted	0.296							0.968				
Satd. Flow (perm)	528	1723	0	0	1765	1464	0	1752	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						187		131				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	0%	0%	2%	1%	1%	0%	3%	0%	0%	0%
Adj. Flow (vph)	640	494	0	0	393	187	206	0	107	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	640	494	0	0	393	187	0	313	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												

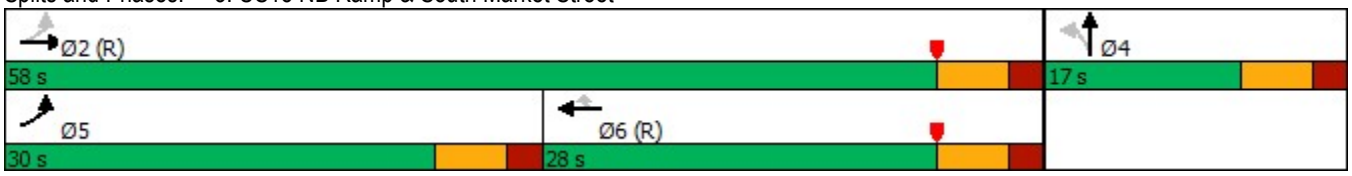


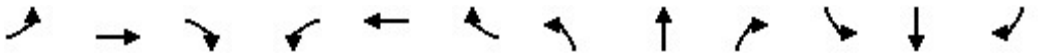
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	30.0	58.0			28.0	28.0	17.0	17.0				
Total Split (%)	40.0%	77.3%			37.3%	37.3%	22.7%	22.7%				
Maximum Green (s)	24.0	52.0			22.0	22.0	11.0	11.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	53.6	53.6			26.0	26.0		11.4				
Actuated g/C Ratio	0.71	0.71			0.35	0.35		0.15				
v/c Ratio	0.88	0.40			0.64	0.30		0.83				
Control Delay	12.7	2.9			28.1	4.8		38.2				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	12.7	2.9			28.1	4.8		38.2				
LOS	B	A			C	A		D				
Approach Delay		8.4			20.6			38.2				
Approach LOS		A			C			D				
Queue Length 50th (ft)	5	28			129	0		65				
Queue Length 95th (ft)	m5	m36			195	30		#151				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	765	1232			612	630		390				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.84	0.40			0.64	0.30		0.80				

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 36 (48%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 16.5		Intersection LOS: B	
Intersection Capacity Utilization 85.7%		ICU Level of Service E	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: US15 NB Ramp & South Market Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	428	64	198	308	129	56	66	172	123	119	36
Future Volume (veh/h)	47	428	64	198	308	129	56	66	172	123	119	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1935	1878	1711	1697	1697	1837	1837	1795	1794	1866	1794
Adj Flow Rate, veh/h	50	455	57	211	328	120	60	70	103	131	127	19
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	1	5	0	1	1	0	0	3	0	0	0
Cap, veh/h	618	727	91	458	843	715	290	72	105	268	240	36
Arrive On Green	0.04	0.43	0.43	0.18	0.83	0.83	0.05	0.11	0.11	0.10	0.15	0.15
Sat Flow, veh/h	1856	1686	211	1629	1697	1438	1750	671	988	1709	1586	237
Grp Volume(v), veh/h	50	0	512	211	328	120	60	0	173	131	0	146
Grp Sat Flow(s),veh/h/ln	1856	0	1897	1629	1697	1438	1750	0	1659	1709	0	1823
Q Serve(g_s), s	1.1	0.0	15.8	5.0	3.6	1.2	2.2	0.0	7.8	4.9	0.0	5.5
Cycle Q Clear(g_c), s	1.1	0.0	15.8	5.0	3.6	1.2	2.2	0.0	7.8	4.9	0.0	5.5
Prop In Lane	1.00		0.11	1.00		1.00	1.00		0.60	1.00		0.13
Lane Grp Cap(c), veh/h	618	0	818	458	843	715	290	0	177	268	0	276
V/C Ratio(X)	0.08	0.00	0.63	0.46	0.39	0.17	0.21	0.00	0.98	0.49	0.00	0.53
Avail Cap(c_a), veh/h	741	0	818	459	843	715	383	0	177	282	0	276
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.86	0.86	0.86	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.8	0.0	16.6	10.1	3.5	3.3	27.4	0.0	33.4	25.2	0.0	29.3
Incr Delay (d2), s/veh	0.1	0.0	3.6	0.6	1.2	0.4	0.3	0.0	60.8	1.4	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	0.0	11.0	2.5	2.0	0.7	1.7	0.0	10.1	3.5	0.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.8	0.0	20.2	10.8	4.7	3.7	27.7	0.0	94.2	26.6	0.0	31.2
LnGrp LOS	B	A	C	B	A	A	C	A	F	C	A	C
Approach Vol, veh/h		562			659			233			277	
Approach Delay, s/veh		19.4			6.5			77.1			29.0	
Approach LOS		B			A			E			C	

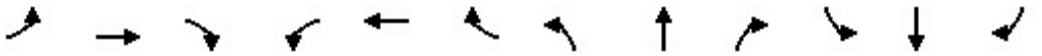
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	37.7	8.2	15.8	8.3	42.7	11.6	12.4
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 7	30.7	* 7	7.0	* 7	30.7	* 7	7.0
Max Q Clear Time (g_c+I1), s	7.0	17.8	4.2	7.5	3.1	5.6	6.9	9.8
Green Ext Time (p_c), s	0.0	4.2	0.0	0.0	0.0	4.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.8
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



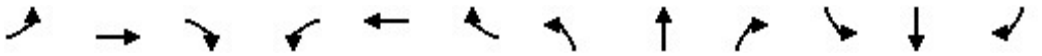
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	584	145	81	425	0	0	0	0	386	0	196
Future Volume (veh/h)	0	584	145	81	425	0	0	0	0	386	0	196
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1772	0				1860	1950	1860
Adj Flow Rate, veh/h	0	649	0	90	472	0				429	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	1	0	0	2	0				1	0	1
Cap, veh/h	0	819		315	1047	0				500	0	
Arrive On Green	0.00	0.46	0.00	0.12	1.00	0.00				0.27	0.00	0.00
Sat Flow, veh/h	0	1786	1525	1714	1772	0				1857	0	0
Grp Volume(v), veh/h	0	649	0	90	472	0				429	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1772	0				1857	0	0
Q Serve(g_s), s	0.0	23.2	0.0	1.9	0.0	0.0				16.5	0.0	0.0
Cycle Q Clear(g_c), s	0.0	23.2	0.0	1.9	0.0	0.0				16.5	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	819		315	1047	0				500	0	
V/C Ratio(X)	0.00	0.79		0.29	0.45	0.00				0.86	0.00	
Avail Cap(c_a), veh/h	0	819		398	1047	0				594	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.72	0.00	0.72	0.72	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	17.3	0.0	12.1	0.0	0.0				26.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	5.7	0.0	0.4	1.0	0.0				10.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	13.6	0.0	1.0	0.5	0.0				13.1	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	22.9	0.0	12.5	1.0	0.0				36.5	0.0	6.0
LnGrp LOS	A	C		B	A	A				D	A	A
Approach Vol, veh/h		649	A		562						647	A
Approach Delay, s/veh		22.9			2.9						26.3	
Approach LOS		C			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.9	39.9		25.2		49.8
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	26.0		23.0		39.5
Max Q Clear Time (g_c+I1), s	3.9	25.2		18.5		2.0
Green Ext Time (p_c), s	0.1	0.1		0.7		0.3

Intersection Summary		
HCM 6th Ctrl Delay		18.0
HCM 6th LOS		B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	550	425	0	0	338	161	177	0	92	0	0	0
Future Volume (veh/h)	550	425	0	0	338	161	177	0	92	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1786	0	0	1772	1786	1823	1911	1795			
Adj Flow Rate, veh/h	640	494	0	0	393	0	206	0	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	1	1	0	0	2	1	1	0	3			
Cap, veh/h	762	1284	0	0	675		269	0				
Arrive On Green	0.36	0.96	0.00	0.00	0.38	0.00	0.15	0.00	0.00			
Sat Flow, veh/h	1701	1786	0	0	1772	1514	1820	0	0			
Grp Volume(v), veh/h	640	494	0	0	393	0	206	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1786	0	0	1772	1514	1820	0	0			
Q Serve(g_s), s	15.9	1.4	0.0	0.0	13.2	0.0	8.2	0.0	0.0			
Cycle Q Clear(g_c), s	15.9	1.4	0.0	0.0	13.2	0.0	8.2	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	762	1284	0	0	675		269	0				
V/C Ratio(X)	0.84	0.38	0.00	0.00	0.58		0.77	0.00				
Avail Cap(c_a), veh/h	867	1284	0	0	675		291	0				
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.28	0.28	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	8.6	0.5	0.0	0.0	18.5	0.0	30.7	0.0	0.0			
Incr Delay (d2), s/veh	2.0	0.2	0.0	0.0	3.6	0.0	10.8	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	4.8	0.5	0.0	0.0	9.4	0.0	7.6	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	10.6	0.7	0.0	0.0	22.1	0.0	41.5	0.0	6.0			
LnGrp LOS	B	A	A	A	C		D	A	A			
Approach Vol, veh/h		1134			393	A		313	A			
Approach Delay, s/veh		6.3			22.1			29.4				
Approach LOS		A			C			C				

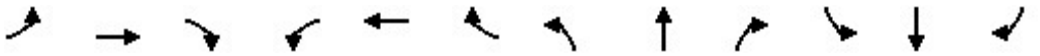
Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		58.9		16.1	25.3	33.6			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		52.0		11.0	24.0	22.0			
Max Q Clear Time (g_c+I1), s		3.4		10.2	17.9	15.2			
Green Ext Time (p_c), s		0.2		0.1	1.4	0.1			

Intersection Summary									
HCM 6th Ctrl Delay		13.6							
HCM 6th LOS		B							

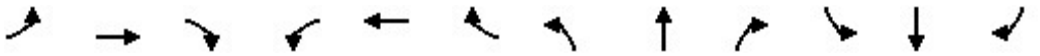
Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

2022 Opening Year No Build Scenario With Adjacent Development PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	460	71	198	318	129	58	66	172	123	119	37
Future Volume (vph)	50	460	71	198	318	129	58	66	172	123	119	37
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		225	200		185	175		0	150		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	50			75			100			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.892			0.965	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	1757	1437	1620	1747	1485	1604	1579	0	1645	1786	0
Flt Permitted	0.533			0.280			0.613			0.377		
Satd. Flow (perm)	946	1757	1437	477	1747	1485	1035	1579	0	653	1786	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			121			137		140			17	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			569			553			571	
Travel Time (s)		14.1			9.7			15.1			11.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	5%	0%	1%	1%	0%	0%	3%	0%	0%	0%
Adj. Flow (vph)	53	489	76	211	338	137	62	70	183	131	127	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	489	76	211	338	137	62	253	0	131	166	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	34	34	34	34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6	-6	-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6	-6	-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40	40	40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	3	1	6	7	3	8		7	4	
Switch Phase												

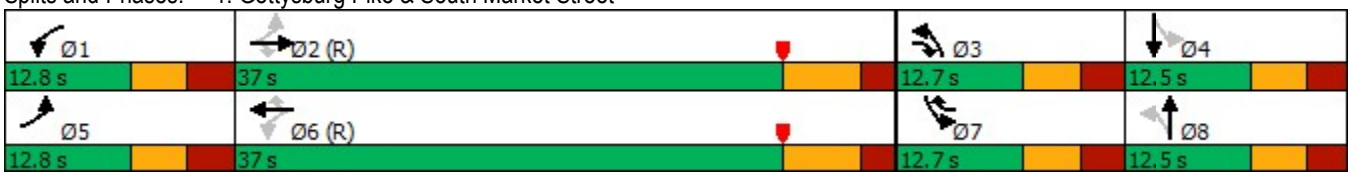


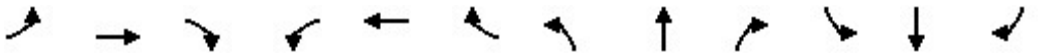
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0	3.0	3.0	10.0	3.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	10.6	39.6	10.5	9.6	16.6	9.5	10.5	9.5		9.5	9.5	
Total Split (s)	12.8	37.0	12.7	12.8	37.0	12.7	12.7	12.5		12.7	12.5	
Total Split (%)	17.1%	49.3%	16.9%	17.1%	49.3%	16.9%	16.9%	16.7%		16.9%	16.7%	
Maximum Green (s)	7.0	30.6	7.0	7.0	30.6	7.0	7.0	7.0		7.0	7.0	
Yellow Time (s)	3.2	4.4	3.2	3.2	4.4	3.2	3.2	3.2		3.2	3.2	
All-Red Time (s)	2.6	2.0	2.5	2.6	2.0	2.5	2.5	2.3		2.5	2.3	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.8	5.4	4.7	4.8	5.4	4.7	4.7	4.5		4.7	4.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0	3.0	3.0	6.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0	0.0	0.0	13.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max	None	None	C-Max	None	None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			22.0			22.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	39.7	31.6	44.7	42.3	36.9	50.2	15.5	8.0		16.8	10.6	
Actuated g/C Ratio	0.53	0.42	0.60	0.56	0.49	0.67	0.21	0.11		0.22	0.14	
v/c Ratio	0.09	0.66	0.08	0.54	0.39	0.13	0.23	0.86		0.52	0.63	
Control Delay	6.8	22.7	0.7	10.5	8.9	1.1	23.2	45.0		30.1	42.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	6.8	22.7	0.7	10.5	8.9	1.1	23.2	45.0		30.1	42.4	
LOS	A	C	A	B	A	A	C	D		C	D	
Approach Delay		18.6			7.8			40.7			37.0	
Approach LOS		B			A			D			D	
Queue Length 50th (ft)	7	141	0	16	52	0	17	41		38	55	
Queue Length 95th (ft)	18	224	5	m26	m83	m5	40	#143		74	#137	
Internal Link Dist (ft)		747			489			473			491	
Turn Bay Length (ft)	175		225	200		185	175			150		
Base Capacity (vph)	586	741	911	390	858	1040	278	293		251	265	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.09	0.66	0.08	0.54	0.39	0.13	0.22	0.86		0.52	0.63	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 54 (72%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 21.2		Intersection LOS: C	
Intersection Capacity Utilization 75.3%		ICU Level of Service D	
Analysis Period (min) 15			

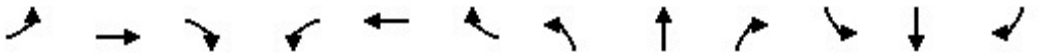
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	612	149	81	431	0	0	0	0	386	0	200
Future Volume (vph)	0	612	149	81	431	0	0	0	0	386	0	200
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	100		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.954	
Flt Protected				0.950							0.968	
Satd. Flow (prot)	0	1782	1530	1653	1765	0	0	0	0	0	1773	0
Flt Permitted				0.111							0.968	
Satd. Flow (perm)	0	1782	1530	193	1765	0	0	0	0	0	1773	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			139								145	
Link Speed (mph)		30			40			30			30	
Link Distance (ft)		569			608			453			537	
Travel Time (s)		12.9			10.4			10.3			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	0%	0%	0%	1%	0%	1%
Adj. Flow (vph)	0	680	166	90	479	0	0	0	0	429	0	222
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	680	166	90	479	0	0	0	0	0	651	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		34.5	34.5	13.5	48.0					27.0	27.0	
Total Split (%)		46.0%	46.0%	18.0%	64.0%					36.0%	36.0%	
Maximum Green (s)		28.0	28.0	7.0	41.5					21.0	21.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		31.8	31.8	42.5	42.5						22.0	
Actuated g/C Ratio		0.42	0.42	0.57	0.57						0.29	
v/c Ratio		0.90	0.23	0.35	0.48						1.05	
Control Delay		33.2	5.3	6.2	4.7						72.0	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		33.2	5.3	6.2	4.7						72.0	
LOS		C	A	A	A						E	
Approach Delay		27.7			5.0						72.0	
Approach LOS		C			A						E	
Queue Length 50th (ft)		139	0	0	12						~226	
Queue Length 95th (ft)		m#399	m19	m8	m13						#386	
Internal Link Dist (ft)		489			528			373			457	
Turn Bay Length (ft)			125	100								
Base Capacity (vph)		754	727	265	1000						622	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.90	0.23	0.34	0.48						1.05	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 24 (32%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.05			
Intersection Signal Delay: 35.4		Intersection LOS: D	
Intersection Capacity Utilization 87.6%		ICU Level of Service E	
Analysis Period (min) 15			

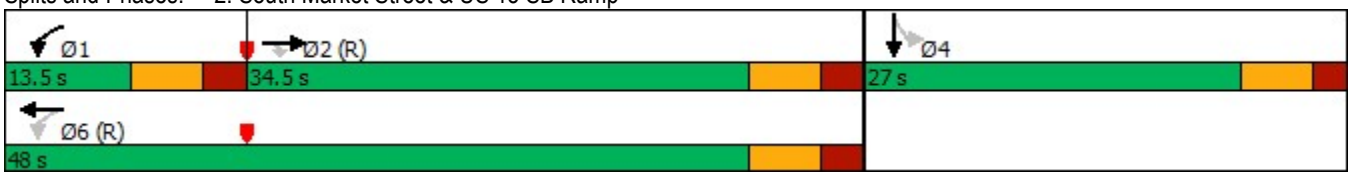
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

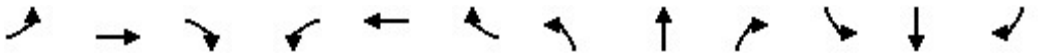
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

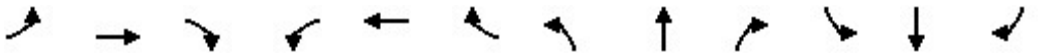
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US 15 SB Ramp





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	566	437	0	0	342	161	179	0	92	0	0	0
Future Volume (vph)	566	437	0	0	342	161	179	0	92	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.954				
Flt Protected	0.950							0.968				
Satd. Flow (prot)	1693	1723	0	0	1765	1464	0	1753	0	0	0	0
Flt Permitted	0.273							0.968				
Satd. Flow (perm)	487	1723	0	0	1765	1464	0	1753	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						187		131				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	0%	0%	2%	1%	1%	0%	3%	0%	0%	0%
Adj. Flow (vph)	658	508	0	0	398	187	208	0	107	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	658	508	0	0	398	187	0	315	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												

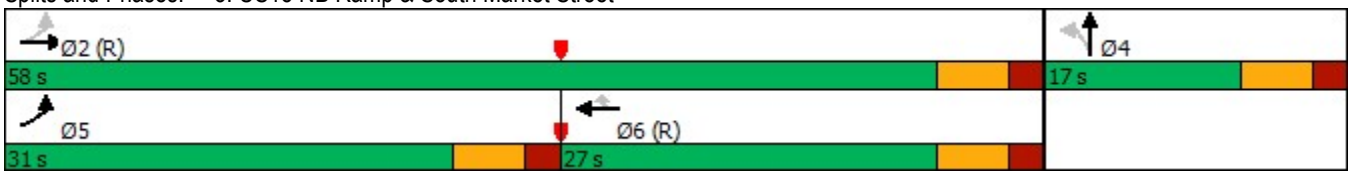


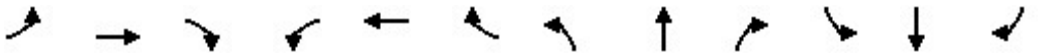
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	31.0	58.0			27.0	27.0	17.0	17.0				
Total Split (%)	41.3%	77.3%			36.0%	36.0%	22.7%	22.7%				
Maximum Green (s)	25.0	52.0			21.0	21.0	11.0	11.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	53.6	53.6			24.6	24.6		11.4				
Actuated g/C Ratio	0.71	0.71			0.33	0.33		0.15				
v/c Ratio	0.90	0.41			0.69	0.31		0.84				
Control Delay	18.9	1.2			31.1	5.0		38.8				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	18.9	1.2			31.1	5.0		38.8				
LOS	B	A			C	A		D				
Approach Delay		11.2			22.8			38.8				
Approach LOS		B			C			D				
Queue Length 50th (ft)	72	13			134	0		66				
Queue Length 95th (ft)	m70	m13			#220	30		#153				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	766	1231			578	605		390				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.86	0.41			0.69	0.31		0.81				

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 72 (96%), Referenced to phase 2:EBTL and 6:WBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 18.7		Intersection LOS: B	
Intersection Capacity Utilization 87.6%		ICU Level of Service E	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: US15 NB Ramp & South Market Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	460	71	198	318	129	58	66	172	123	119	37
Future Volume (veh/h)	50	460	71	198	318	129	58	66	172	123	119	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1935	1878	1711	1697	1697	1837	1837	1795	1794	1866	1794
Adj Flow Rate, veh/h	53	489	65	211	338	120	62	70	103	131	127	20
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	1	5	0	1	1	0	0	3	0	0	0
Cap, veh/h	615	832	772	463	837	853	291	72	105	269	237	37
Arrive On Green	0.04	0.43	0.43	0.18	0.82	0.82	0.06	0.11	0.11	0.10	0.15	0.15
Sat Flow, veh/h	1856	1935	1591	1629	1697	1438	1750	671	988	1709	1574	248
Grp Volume(v), veh/h	53	489	65	211	338	120	62	0	173	131	0	147
Grp Sat Flow(s),veh/h/ln	1856	1935	1591	1629	1697	1438	1750	0	1659	1709	0	1822
Q Serve(g_s), s	1.2	14.5	1.6	5.0	3.9	1.0	2.3	0.0	7.8	4.9	0.0	5.6
Cycle Q Clear(g_c), s	1.2	14.5	1.6	5.0	3.9	1.0	2.3	0.0	7.8	4.9	0.0	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.60	1.00		0.14
Lane Grp Cap(c), veh/h	615	832	772	463	837	853	291	0	177	269	0	275
V/C Ratio(X)	0.09	0.59	0.08	0.46	0.40	0.14	0.21	0.00	0.98	0.49	0.00	0.54
Avail Cap(c_a), veh/h	735	832	772	465	837	853	381	0	177	282	0	275
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.87	0.87	0.87	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.8	16.3	10.4	9.8	3.7	2.2	27.3	0.0	33.4	25.6	0.0	29.4
Incr Delay (d2), s/veh	0.1	3.0	0.2	0.6	1.3	0.3	0.4	0.0	60.8	1.4	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	10.4	1.1	2.4	2.2	0.6	1.8	0.0	10.1	3.6	0.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.8	19.4	10.6	10.4	4.9	2.5	27.7	0.0	94.2	26.9	0.0	31.5
LnGrp LOS	B	B	B	B	A	A	C	A	F	C	A	C
Approach Vol, veh/h		607			669			235			278	
Approach Delay, s/veh		17.7			6.2			76.7			29.3	
Approach LOS		B			A			E			C	

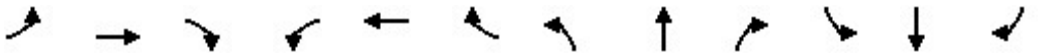
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	37.6	8.8	15.8	7.9	42.4	12.1	12.5
Change Period (Y+Rc), s	* 5.8	6.4	* 5.7	5.5	* 5.8	6.4	* 5.7	5.5
Max Green Setting (Gmax), s	* 7	30.6	* 7	7.0	* 7	30.6	* 7	7.0
Max Q Clear Time (g_c+I1), s	7.0	16.5	4.3	7.6	3.2	5.9	6.9	9.8
Green Ext Time (p_c), s	0.0	4.7	0.0	0.0	0.0	4.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.0
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



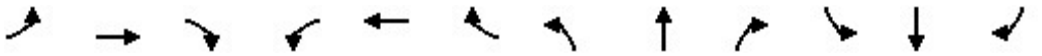
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	612	149	81	431	0	0	0	0	386	0	200
Future Volume (veh/h)	0	612	149	81	431	0	0	0	0	386	0	200
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1772	0				1860	1950	1860
Adj Flow Rate, veh/h	0	680	0	90	479	0				429	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	1	0	0	2	0				1	0	1
Cap, veh/h	0	825		297	1052	0				495	0	
Arrive On Green	0.00	0.46	0.00	0.06	0.59	0.00				0.27	0.00	0.00
Sat Flow, veh/h	0	1786	1525	1714	1772	0				1857	0	0
Grp Volume(v), veh/h	0	680	0	90	479	0				429	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1772	0				1857	0	0
Q Serve(g_s), s	0.0	24.8	0.0	1.9	11.3	0.0				16.5	0.0	0.0
Cycle Q Clear(g_c), s	0.0	24.8	0.0	1.9	11.3	0.0				16.5	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	825		297	1052	0				495	0	
V/C Ratio(X)	0.00	0.82		0.30	0.46	0.00				0.87	0.00	
Avail Cap(c_a), veh/h	0	825		380	1052	0				545	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.74	0.00	0.67	0.67	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	17.5	0.0	13.6	8.5	0.0				26.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	7.0	0.0	0.4	1.0	0.0				13.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	15.4	0.0	1.1	6.2	0.0				13.6	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	24.5	0.0	13.9	9.4	0.0				39.3	0.0	6.0
LnGrp LOS	A	C		B	A	A				D	A	A
Approach Vol, veh/h		680	A		569						651	A
Approach Delay, s/veh		24.5			10.2						27.9	
Approach LOS		C			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.9	40.1		25.0		50.0
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	28.0		21.0		41.5
Max Q Clear Time (g_c+I1), s	3.9	26.8		18.5		13.3
Green Ext Time (p_c), s	0.1	0.1		0.5		0.3

Intersection Summary	
HCM 6th Ctrl Delay	21.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	566	437	0	0	342	161	179	0	92	0	0	0
Future Volume (veh/h)	566	437	0	0	342	161	179	0	92	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1786	0	0	1772	1786	1823	1911	1795			
Adj Flow Rate, veh/h	658	508	0	0	398	0	208	0	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	1	1	0	0	2	1	1	0	3			
Cap, veh/h	749	1282	0	0	708		271	0				
Arrive On Green	0.17	0.48	0.00	0.00	0.40	0.00	0.15	0.00	0.00			
Sat Flow, veh/h	1701	1786	0	0	1772	1514	1820	0	0			
Grp Volume(v), veh/h	658	508	0	0	398	0	208	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1786	0	0	1772	1514	1820	0	0			
Q Serve(g_s), s	14.0	13.7	0.0	0.0	13.0	0.0	8.2	0.0	0.0			
Cycle Q Clear(g_c), s	14.0	13.7	0.0	0.0	13.0	0.0	8.2	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	749	1282	0	0	708		271	0				
V/C Ratio(X)	0.88	0.40	0.00	0.00	0.56		0.77	0.00				
Avail Cap(c_a), veh/h	910	1282	0	0	708		291	0				
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.31	0.31	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	11.5	9.0	0.0	0.0	17.4	0.0	30.7	0.0	0.0			
Incr Delay (d2), s/veh	2.9	0.3	0.0	0.0	3.2	0.0	11.0	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	6.9	7.2	0.0	0.0	9.1	0.0	7.7	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	14.4	9.3	0.0	0.0	20.7	0.0	41.7	0.0	6.0			
LnGrp LOS	B	A	A	A	C		D	A	A			
Approach Vol, veh/h		1166			398	A		315	A			
Approach Delay, s/veh		12.2			20.7			29.6				
Approach LOS		B			C			C				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		58.8		16.2	23.9	35.0			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		52.0		11.0	25.0	21.0			
Max Q Clear Time (g_c+I1), s		15.7		10.2	16.0	15.0			
Green Ext Time (p_c), s		0.3		0.1	1.9	0.1			

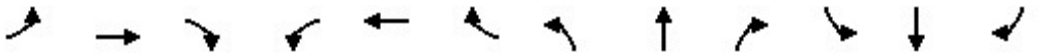
Intersection Summary		
HCM 6th Ctrl Delay	16.9	
HCM 6th LOS	B	

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

2022 Opening Year Build Scenario
PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	351	90	242	240	129	76	79	218	225	135	102
Future Volume (vph)	126	351	90	242	240	129	76	79	218	225	135	102
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		0	200		185	175		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	50			75			100			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.969				0.850		0.890			0.935	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	1696	0	1620	1747	1485	1604	1587	0	1645	1730	0
Flt Permitted	0.546			0.310			0.490			0.203		
Satd. Flow (perm)	969	1696	0	529	1747	1485	827	1587	0	351	1730	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17				168		134			38	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			370			459			336	
Travel Time (s)		14.1			6.3			12.5			6.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	3%	0%	1%	1%	0%	0%	2%	0%	0%	0%
Adj. Flow (vph)	134	373	96	257	255	137	81	84	232	239	144	109
Shared Lane Traffic (%)												
Lane Group Flow (vph)	134	469	0	257	255	137	81	316	0	239	253	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	34	34		34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40		40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												



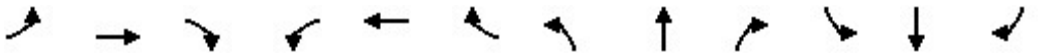
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0		3.0	10.0	10.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	10.6	39.6		9.6	16.6	16.6	10.5	9.5		9.5	9.5	
Total Split (s)	13.3	41.7		13.3	41.7	41.7	12.2	20.0		15.0	22.8	
Total Split (%)	14.8%	46.3%		14.8%	46.3%	46.3%	13.6%	22.2%		16.7%	25.3%	
Maximum Green (s)	7.0	35.3		7.0	35.3	35.3	7.0	14.6		9.8	17.4	
Yellow Time (s)	3.0	4.4		3.0	4.4	4.4	3.0	3.0		3.0	3.0	
All-Red Time (s)	3.3	2.0		3.3	2.0	2.0	2.2	2.4		2.2	2.4	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	5.3	5.4		5.3	5.4	5.4	4.2	4.4		4.2	4.4	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0		3.0	6.0	6.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0		0.0	25.0	25.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0		0.0	13.0	13.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		26.0			26.0	26.0		17.0			17.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	45.4	37.4		45.7	37.6	37.6	22.4	14.5		28.5	19.7	
Actuated g/C Ratio	0.50	0.42		0.51	0.42	0.42	0.25	0.16		0.32	0.22	
v/c Ratio	0.24	0.66		0.70	0.35	0.19	0.30	0.86		0.90	0.62	
Control Delay	11.1	26.1		15.5	9.4	0.7	24.1	44.4		61.4	35.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	11.1	26.1		15.5	9.4	0.7	24.1	44.4		61.4	35.1	
LOS	B	C		B	A	A	C	D		E	D	
Approach Delay		22.7			10.0			40.2			47.9	
Approach LOS		C			A			D			D	
Queue Length 50th (ft)	28	165		26	41	0	25	81		83	90	
Queue Length 95th (ft)	51	254		m51	m56	m1	52	#193		#181	156	
Internal Link Dist (ft)		747			290			379			256	
Turn Bay Length (ft)	175			200		185	175			150		
Base Capacity (vph)	553	715		365	729	717	277	385		266	409	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.24	0.66		0.70	0.35	0.19	0.29	0.82		0.90	0.62	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 86 (96%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 27.9		Intersection LOS: C	
Intersection Capacity Utilization 87.2%		ICU Level of Service E	
Analysis Period (min) 15			

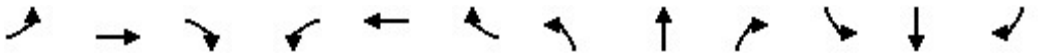
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	628	174	81	469	0	0	0	0	386	0	221
Future Volume (vph)	0	628	174	81	469	0	0	0	0	386	0	221
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	100		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.951	
Flt Protected				0.950							0.969	
Satd. Flow (prot)	0	1782	1530	1653	1765	0	0	0	0	0	1769	0
Flt Permitted				0.093							0.969	
Satd. Flow (perm)	0	1782	1530	162	1765	0	0	0	0	0	1769	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			134								121	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		199			608			453			537	
Travel Time (s)		3.4			10.4			10.3			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	0%	0%	0%	1%	0%	1%
Adj. Flow (vph)	0	698	193	90	521	0	0	0	0	429	0	246
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	698	193	90	521	0	0	0	0	0	675	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		41.5	41.5	13.5	55.0					35.0	35.0	
Total Split (%)		46.1%	46.1%	15.0%	61.1%					38.9%	38.9%	
Maximum Green (s)		35.0	35.0	7.0	48.5					29.0	29.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		38.7	38.7	49.5	49.5						30.0	
Actuated g/C Ratio		0.43	0.43	0.55	0.55						0.33	
v/c Ratio		0.91	0.26	0.41	0.54						1.01	
Control Delay		38.9	8.4	9.8	9.7						63.0	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		38.9	8.4	9.8	9.7						63.0	
LOS		D	A	A	A						E	
Approach Delay		32.3			9.7						63.0	
Approach LOS		C			A						E	
Queue Length 50th (ft)		330	20	17	160						~266	
Queue Length 95th (ft)		m#465	m38	m19	m202						#457	
Internal Link Dist (ft)		119			528			373			457	
Turn Bay Length (ft)			125	100								
Base Capacity (vph)		766	734	221	970						670	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.91	0.26	0.41	0.54						1.01	

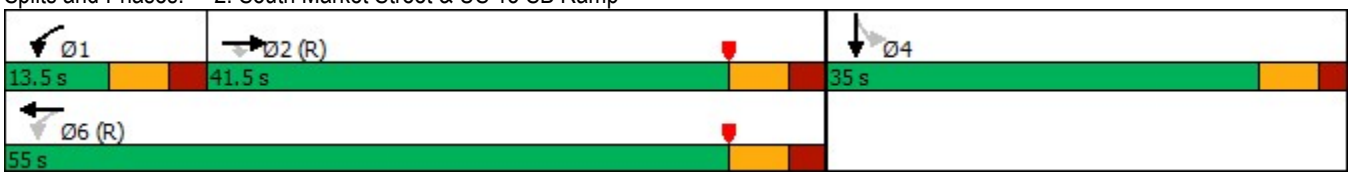
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay: 35.5		Intersection LOS: D	
Intersection Capacity Utilization 89.8%		ICU Level of Service E	
Analysis Period (min) 15			

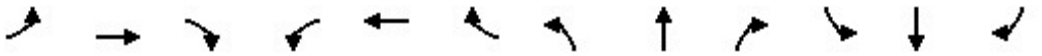
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

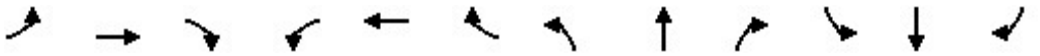
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US 15 SB Ramp





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	582	437	0	0	353	161	206	0	92	0	0	0
Future Volume (vph)	582	437	0	0	353	161	206	0	92	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.958				
Flt Protected	0.950							0.967				
Satd. Flow (prot)	1693	1723	0	0	1765	1464	0	1759	0	0	0	0
Flt Permitted	0.263							0.967				
Satd. Flow (perm)	469	1723	0	0	1765	1464	0	1759	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						187		109				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	0%	0%	2%	1%	1%	0%	3%	0%	0%	0%
Adj. Flow (vph)	677	508	0	0	410	187	240	0	107	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	677	508	0	0	410	187	0	347	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												



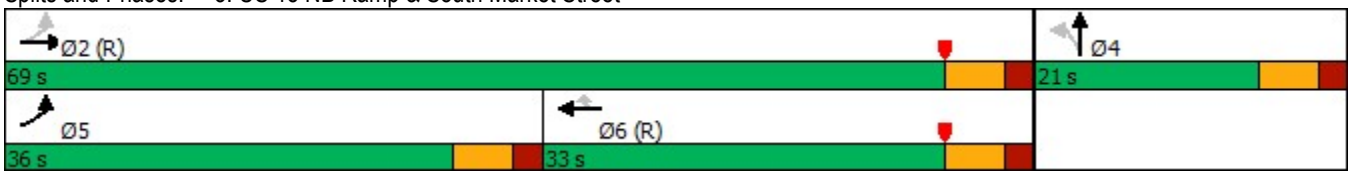
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	36.0	69.0			33.0	33.0	21.0	21.0				
Total Split (%)	40.0%	76.7%			36.7%	36.7%	23.3%	23.3%				
Maximum Green (s)	30.0	63.0			27.0	27.0	15.0	15.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	64.6	64.6			30.4	30.4		15.4				
Actuated g/C Ratio	0.72	0.72			0.34	0.34		0.17				
v/c Ratio	0.92	0.41			0.69	0.30		0.89				
Control Delay	23.1	1.2			34.2	5.1		50.4				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	23.1	1.2			34.2	5.1		50.4				
LOS	C	A			C	A		D				
Approach Delay		13.7			25.1			50.4				
Approach LOS		B			C			D				
Queue Length 50th (ft)	146	14			166	0		108				
Queue Length 95th (ft)	m124	m15			238	32		#209				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	758	1236			596	618		402				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.89	0.41			0.69	0.30		0.86				

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 46 (51%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 22.9		Intersection LOS: C	
Intersection Capacity Utilization 89.8%		ICU Level of Service E	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

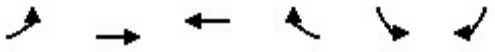
Splits and Phases: 3: US 15 NB Ramp & South Market Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	202	29	226	108	33	259
Future Volume (vph)	202	29	226	108	33	259
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		0%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.956			
Flt Protected	0.950					0.994
Satd. Flow (prot)	1770	1583	1781	0	0	1826
Flt Permitted	0.950					0.994
Satd. Flow (perm)	1770	1583	1781	0	0	1826
Link Speed (mph)	25		25			35
Link Distance (ft)	189		336			230
Travel Time (s)	5.2		9.2			4.5
Confl. Peds. (#/hr)					121	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	224	32	251	120	37	288
Shared Lane Traffic (%)						
Lane Group Flow (vph)	224	32	371	0	0	325
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.1%		ICU Level of Service B	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	794	610	93	0	0
Future Volume (vph)	0	794	610	93	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	1900	1844	1552	0	0
Flt Permitted						
Satd. Flow (perm)	0	1900	1844	1552	0	0
Link Speed (mph)		30	40		25	
Link Distance (ft)		370	199		166	
Travel Time (s)		8.4	3.4		4.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	2%	0%	0%
Adj. Flow (vph)	0	882	678	103	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	882	678	103	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		



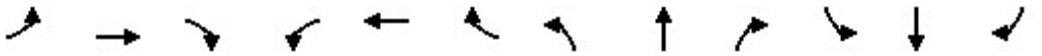
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	16	38	334	0	84	383
Future Volume (vph)	16	38	334	0	84	383
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Grade (%)	-1%		-4%			4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950					0.991
Satd. Flow (prot)	1778	1591	1773	0	0	1675
Flt Permitted	0.950					0.991
Satd. Flow (perm)	1778	1591	1773	0	0	1675
Link Speed (mph)	25		25			25
Link Distance (ft)	306		420			459
Travel Time (s)	8.3		11.5			12.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	18	42	371	0	93	426
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	42	371	0	0	519
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	1.07	1.07	1.12	1.12
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	39	295	13	0	399
Future Volume (vph)	0	39	295	13	0	399
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%		1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865	0.994			
Flt Protected						
Satd. Flow (prot)	0	1603	1842	0	0	1835
Flt Permitted						
Satd. Flow (perm)	0	1603	1842	0	0	1835
Link Speed (mph)	25		25			25
Link Distance (ft)	315		365			420
Travel Time (s)	8.6		10.0			11.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	2%	2%	2%	0%	3%
Adj. Flow (vph)	0	43	328	14	0	443
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	43	342	0	0	443
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	26.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	351	90	242	240	129	76	79	218	225	135	102
Future Volume (veh/h)	126	351	90	242	240	129	76	79	218	225	135	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1935	1906	1711	1697	1697	1837	1837	1809	1794	1866	1794
Adj Flow Rate, veh/h	134	373	82	257	255	76	81	84	182	239	144	94
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	1	3	0	1	1	0	0	2	0	0	0
Cap, veh/h	561	620	136	406	712	604	312	90	194	299	243	159
Arrive On Green	0.07	0.40	0.40	0.09	0.42	0.42	0.06	0.17	0.17	0.12	0.23	0.23
Sat Flow, veh/h	1856	1536	338	1629	1697	1438	1750	517	1119	1709	1054	688
Grp Volume(v), veh/h	134	0	455	257	255	76	81	0	266	239	0	238
Grp Sat Flow(s),veh/h/ln	1856	0	1874	1629	1697	1438	1750	0	1636	1709	0	1742
Q Serve(g_s), s	3.7	0.0	17.2	8.0	9.2	2.9	3.3	0.0	14.4	10.0	0.0	11.0
Cycle Q Clear(g_c), s	3.7	0.0	17.2	8.0	9.2	2.9	3.3	0.0	14.4	10.0	0.0	11.0
Prop In Lane	1.00		0.18	1.00		1.00	1.00		0.68	1.00		0.39
Lane Grp Cap(c), veh/h	561	0	756	406	712	604	312	0	284	299	0	402
V/C Ratio(X)	0.24	0.00	0.60	0.63	0.36	0.13	0.26	0.00	0.94	0.80	0.00	0.59
Avail Cap(c_a), veh/h	592	0	756	406	712	604	358	0	284	299	0	402
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.7	0.0	21.2	17.0	17.8	16.0	27.7	0.0	36.7	26.2	0.0	30.9
Incr Delay (d2), s/veh	0.2	0.0	3.5	3.2	1.4	0.4	0.4	0.0	37.2	14.3	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.6	0.0	12.2	5.7	6.5	1.8	2.6	0.0	13.5	8.8	0.0	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.9	0.0	24.7	20.1	19.2	16.4	28.2	0.0	73.9	40.5	0.0	33.2
LnGrp LOS	B	A	C	C	B	B	C	A	E	D	A	C
Approach Vol, veh/h		589			588			347			477	
Approach Delay, s/veh		22.2			19.3			63.2			36.8	
Approach LOS		C			B			E			D	

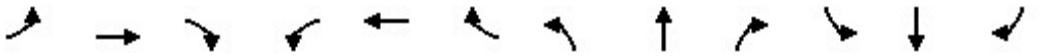
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	41.7	9.9	25.1	11.8	43.2	15.0	20.0
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 7	35.3	* 7	17.4	* 7	35.3	* 9.8	14.6
Max Q Clear Time (g_c+I1), s	10.0	19.2	5.3	13.0	5.7	11.2	12.0	16.4
Green Ext Time (p_c), s	0.0	4.2	0.0	0.3	0.0	3.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	32.0
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



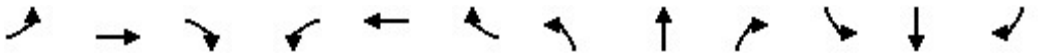
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	628	174	81	469	0	0	0	0	386	0	221
Future Volume (veh/h)	0	628	174	81	469	0	0	0	0	386	0	221
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1772	0				1860	1950	1860
Adj Flow Rate, veh/h	0	698	0	90	521	0				429	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	1	0	0	2	0				1	0	1
Cap, veh/h	0	901		304	1095	0				493	0	
Arrive On Green	0.00	0.50	0.00	0.07	0.82	0.00				0.27	0.00	0.00
Sat Flow, veh/h	0	1786	1525	1714	1772	0				1857	0	0
Grp Volume(v), veh/h	0	698	0	90	521	0				429	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1772	0				1857	0	0
Q Serve(g_s), s	0.0	28.6	0.0	2.1	7.7	0.0				19.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	28.6	0.0	2.1	7.7	0.0				19.9	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	901		304	1095	0				493	0	
V/C Ratio(X)	0.00	0.77		0.30	0.48	0.00				0.87	0.00	
Avail Cap(c_a), veh/h	0	901		367	1095	0				619	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.67	0.67	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	18.1	0.0	14.1	3.8	0.0				31.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	6.5	0.0	0.4	1.0	0.0				10.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	17.7	0.0	1.2	3.7	0.0				15.3	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	24.6	0.0	14.4	4.7	0.0				42.4	0.0	6.0
LnGrp LOS	A	C		B	A	A				D	A	A
Approach Vol, veh/h		698	A		611						569	A
Approach Delay, s/veh		24.6			6.2						33.4	
Approach LOS		C			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.2	50.9		28.9		61.1
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	35.0		29.0		48.5
Max Q Clear Time (g_c+I1), s	4.1	30.6		21.9		9.7
Green Ext Time (p_c), s	0.1	0.3		1.0		0.3

Intersection Summary		
HCM 6th Ctrl Delay		21.3
HCM 6th LOS		C

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	582	437	0	0	353	161	206	0	92	0	0	0
Future Volume (veh/h)	582	437	0	0	353	161	206	0	92	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1786	0	0	1772	1786	1823	1911	1795			
Adj Flow Rate, veh/h	677	508	0	0	410	0	240	0	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	1	1	0	0	2	1	1	0	3			
Cap, veh/h	740	1299	0	0	732		294	0				
Arrive On Green	0.26	0.73	0.00	0.00	0.41	0.00	0.16	0.00	0.00			
Sat Flow, veh/h	1701	1786	0	0	1772	1514	1820	0	0			
Grp Volume(v), veh/h	677	508	0	0	410	0	240	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1786	0	0	1772	1514	1820	0	0			
Q Serve(g_s), s	18.2	9.8	0.0	0.0	15.9	0.0	11.5	0.0	0.0			
Cycle Q Clear(g_c), s	18.2	9.8	0.0	0.0	15.9	0.0	11.5	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	740	1299	0	0	732		294	0				
V/C Ratio(X)	0.92	0.39	0.00	0.00	0.56		0.82	0.00				
Avail Cap(c_a), veh/h	886	1299	0	0	732		324	0				
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.29	0.29	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	12.1	4.7	0.0	0.0	20.2	0.0	36.4	0.0	0.0			
Incr Delay (d2), s/veh	4.3	0.3	0.0	0.0	3.1	0.0	13.8	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	7.8	4.0	0.0	0.0	10.9	0.0	10.2	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	16.4	4.9	0.0	0.0	23.2	0.0	50.2	0.0	6.0			
LnGrp LOS	B	A	A	A	C		D	A	A			
Approach Vol, veh/h		1185			410	A		347	A			
Approach Delay, s/veh		11.5			23.2			36.6				
Approach LOS		B			C			D				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		70.4		19.6	28.2	42.2			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		63.0		15.0	30.0	27.0			
Max Q Clear Time (g_c+I1), s		11.8		13.5	20.2	17.9			
Green Ext Time (p_c), s		0.3		0.1	2.0	0.2			

Intersection Summary		
HCM 6th Ctrl Delay	18.4	
HCM 6th LOS	B	

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	202	29	226	108	33	259
Future Vol, veh/h	202	29	226	108	33	259
Conflicting Peds, #/hr	0	0	0	0	121	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	224	32	251	120	37	288

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	794	432	0	0	492	0
Stage 1	432	-	-	-	-	-
Stage 2	362	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.3	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	398	659	-	-	813	-
Stage 1	663	-	-	-	-	-
Stage 2	806	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	336	593	-	-	731	-
Mov Cap-2 Maneuver	336	-	-	-	-	-
Stage 1	596	-	-	-	-	-
Stage 2	758	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	31.9	0	1.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	336	593	731	-
HCM Lane V/C Ratio	-	-	0.668	0.054	0.05	-
HCM Control Delay (s)	-	-	34.8	11.4	10.2	0
HCM Lane LOS	-	-	D	B	B	A
HCM 95th %tile Q(veh)	-	-	4.6	0.2	0.2	-

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	38	334	0	84	383
Future Vol, veh/h	16	38	334	0	84	383
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-4	-	-	4
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	18	42	371	0	93	426

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	983	371	0	0	371	0
Stage 1	371	-	-	-	-	-
Stage 2	612	-	-	-	-	-
Critical Hdwy	6.22	6.12	-	-	4.3	-
Critical Hdwy Stg 1	6.2	-	-	-	-	-
Critical Hdwy Stg 2	5.22	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	322	722	-	-	896	-
Stage 1	736	-	-	-	-	-
Stage 2	631	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	278	722	-	-	896	-
Mov Cap-2 Maneuver	278	-	-	-	-	-
Stage 1	736	-	-	-	-	-
Stage 2	545	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.8	0	1.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	278	722	896	-
HCM Lane V/C Ratio	-	-	0.064	0.058	0.104	-
HCM Control Delay (s)	-	-	18.8	10.3	9.5	0
HCM Lane LOS	-	-	C	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.2	0.3	-

Intersection	
Int Delay, s/veh	0.5

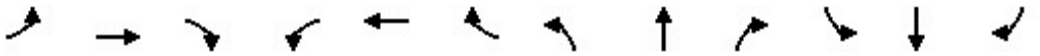
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	39	295	13	0	399
Future Vol, veh/h	0	39	295	13	0	399
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	1	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	2	2	0	3
Mvmt Flow	0	43	328	14	0	443

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	335	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.32	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	742	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	742	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

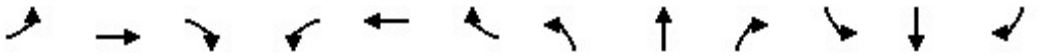
Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	742	-
HCM Lane V/C Ratio	-	-	0.058	-
HCM Control Delay (s)	-	-	10.2	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.2	-

2022 Opening Year Build Scenario With Adjacent Development PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	129	383	97	242	250	129	78	79	218	225	135	103
Future Volume (vph)	129	383	97	242	250	129	78	79	218	225	135	103
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		225	200		185	175		0	150		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	50			75			100			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.890			0.935	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	1757	1465	1620	1747	1485	1604	1587	0	1645	1730	0
Flt Permitted	0.535			0.378			0.443			0.222		
Satd. Flow (perm)	950	1757	1465	645	1747	1485	748	1587	0	384	1730	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			103			137		133			39	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			370			459			336	
Travel Time (s)		14.1			6.3			12.5			6.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	3%	0%	1%	1%	0%	0%	2%	0%	0%	0%
Adj. Flow (vph)	137	407	103	257	266	137	83	84	232	239	144	110
Shared Lane Traffic (%)												
Lane Group Flow (vph)	137	407	103	257	266	137	83	316	0	239	254	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	34	34	34	34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6	-6	-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6	-6	-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40	40	40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	3	1	6	7	3	8		7	4	
Switch Phase												



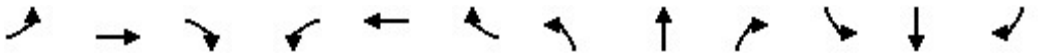
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0	3.0	3.0	10.0	3.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	10.6	39.6	10.5	9.6	16.6	9.5	10.5	9.5		9.5	9.5	
Total Split (s)	12.8	41.2	12.7	12.8	41.2	16.0	12.7	20.0		16.0	23.3	
Total Split (%)	14.2%	45.8%	14.1%	14.2%	45.8%	17.8%	14.1%	22.2%		17.8%	25.9%	
Maximum Green (s)	7.0	34.8	7.0	7.0	34.8	10.3	7.0	14.5		10.3	17.8	
Yellow Time (s)	3.2	4.4	3.2	3.2	4.4	3.2	3.2	3.2		3.2	3.2	
All-Red Time (s)	2.6	2.0	2.5	2.6	2.0	2.5	2.5	2.3		2.5	2.3	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.8	5.4	4.7	4.8	5.4	4.7	4.7	4.5		4.7	4.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0	3.0	3.0	6.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0	0.0	0.0	13.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max	None	None	C-Max	None	None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			22.0			22.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	45.4	36.9	50.0	45.6	37.0	53.7	22.0	14.4		29.1	18.0	
Actuated g/C Ratio	0.50	0.41	0.56	0.51	0.41	0.60	0.24	0.16		0.32	0.20	
v/c Ratio	0.25	0.57	0.12	0.62	0.37	0.15	0.32	0.86		0.85	0.68	
Control Delay	11.4	24.7	2.5	12.4	12.6	1.2	24.4	44.9		51.8	37.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	11.4	24.7	2.5	12.4	12.6	1.2	24.4	44.9		51.8	37.7	
LOS	B	C	A	B	B	A	C	D		D	D	
Approach Delay		18.3			10.2			40.6			44.5	
Approach LOS		B			B			D			D	
Queue Length 50th (ft)	29	142	0	35	68	1	26	81		82	90	
Queue Length 95th (ft)	52	217	17	m49	m87	m4	52	#194		#167	156	
Internal Link Dist (ft)		747			290			379			256	
Turn Bay Length (ft)	175		225	200		185	175			150		
Base Capacity (vph)	545	719	863	412	717	940	260	383		282	392	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.25	0.57	0.12	0.62	0.37	0.15	0.32	0.83		0.85	0.65	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 70 (78%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 25.8		Intersection LOS: C	
Intersection Capacity Utilization 83.3%		ICU Level of Service E	
Analysis Period (min) 15			

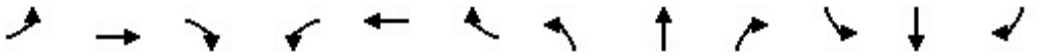
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	656	178	81	475	0	0	0	0	386	0	225
Future Volume (vph)	0	656	178	81	475	0	0	0	0	386	0	225
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	100		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.950	
Flt Protected				0.950							0.969	
Satd. Flow (prot)	0	1782	1530	1653	1765	0	0	0	0	0	1767	0
Flt Permitted				0.093							0.969	
Satd. Flow (perm)	0	1782	1530	162	1765	0	0	0	0	0	1767	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			131								121	
Link Speed (mph)		30			40			30			30	
Link Distance (ft)		199			608			453			537	
Travel Time (s)		4.5			10.4			10.3			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	0%	0%	0%	1%	0%	1%
Adj. Flow (vph)	0	729	198	90	528	0	0	0	0	429	0	250
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	729	198	90	528	0	0	0	0	0	679	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		41.5	41.5	13.5	55.0					35.0	35.0	
Total Split (%)		46.1%	46.1%	15.0%	61.1%					38.9%	38.9%	
Maximum Green (s)		35.0	35.0	7.0	48.5					29.0	29.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		38.7	38.7	49.5	49.5						30.0	
Actuated g/C Ratio		0.43	0.43	0.55	0.55						0.33	
v/c Ratio		0.95	0.27	0.41	0.54						1.01	
Control Delay		43.0	7.2	8.7	7.3						65.0	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		43.0	7.2	8.7	7.3						65.0	
LOS		D	A	A	A						E	
Approach Delay		35.4			7.5						65.0	
Approach LOS		D			A						E	
Queue Length 50th (ft)		~363	14	6	128						~273	
Queue Length 95th (ft)		m#506	m49	m8	m122						#461	
Internal Link Dist (ft)		119			528			373			457	
Turn Bay Length (ft)			125	100								
Base Capacity (vph)		766	732	221	970						669	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.95	0.27	0.41	0.54						1.01	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 32 (36%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay: 36.7		Intersection LOS: D	
Intersection Capacity Utilization 91.6%		ICU Level of Service F	
Analysis Period (min) 15			

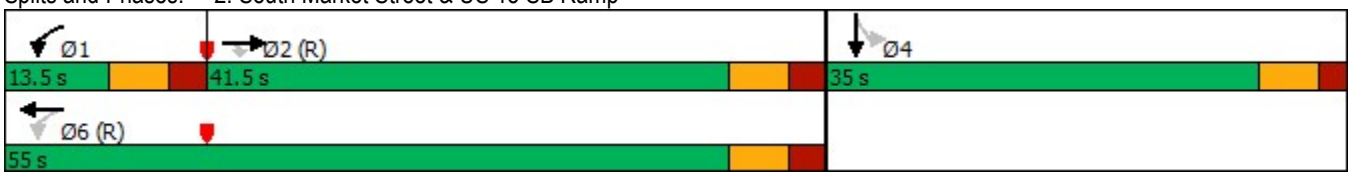
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

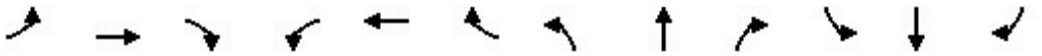
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

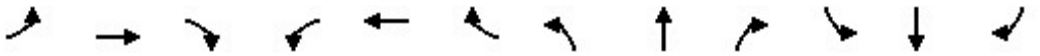
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US 15 SB Ramp





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	598	449	0	0	357	161	208	0	92	0	0	0
Future Volume (vph)	598	449	0	0	357	161	208	0	92	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.959				
Flt Protected	0.950							0.966				
Satd. Flow (prot)	1693	1723	0	0	1765	1464	0	1759	0	0	0	0
Flt Permitted	0.236							0.966				
Satd. Flow (perm)	421	1723	0	0	1765	1464	0	1759	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						187		109				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	0%	0%	2%	1%	1%	0%	3%	0%	0%	0%
Adj. Flow (vph)	695	522	0	0	415	187	242	0	107	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	695	522	0	0	415	187	0	349	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												



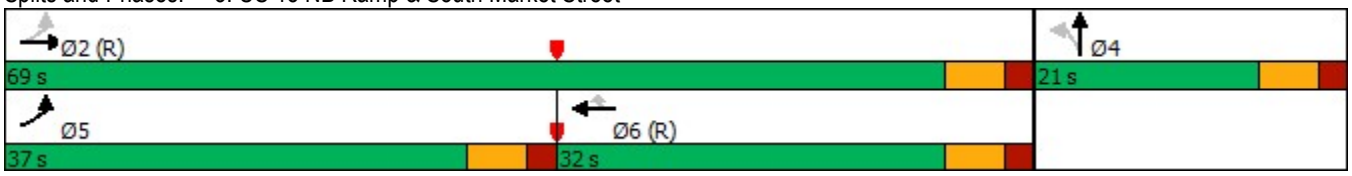
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	37.0	69.0			32.0	32.0	21.0	21.0				
Total Split (%)	41.1%	76.7%			35.6%	35.6%	23.3%	23.3%				
Maximum Green (s)	31.0	63.0			26.0	26.0	15.0	15.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	64.5	64.5			28.7	28.7		15.5				
Actuated g/C Ratio	0.72	0.72			0.32	0.32		0.17				
v/c Ratio	0.94	0.42			0.74	0.31		0.89				
Control Delay	27.6	1.4			37.6	5.3		51.0				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	27.6	1.4			37.6	5.3		51.0				
LOS	C	A			D	A		D				
Approach Delay		16.3			27.6			51.0				
Approach LOS		B			C			D				
Queue Length 50th (ft)	304	20			172	0		109				
Queue Length 95th (ft)	m276	m21			#252	33		#211				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	754	1235			563	594		402				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.92	0.42			0.74	0.31		0.87				

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 25.0		Intersection LOS: C	
Intersection Capacity Utilization 91.6%		ICU Level of Service F	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

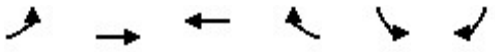
Splits and Phases: 3: US 15 NB Ramp & South Market Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	202	29	229	108	33	260
Future Volume (vph)	202	29	229	108	33	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		0%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.957			
Flt Protected	0.950					0.994
Satd. Flow (prot)	1770	1583	1783	0	0	1826
Flt Permitted	0.950					0.994
Satd. Flow (perm)	1770	1583	1783	0	0	1826
Link Speed (mph)	25		25			35
Link Distance (ft)	189		336			230
Travel Time (s)	5.2		9.2			4.5
Confl. Peds. (#/hr)					121	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	224	32	254	120	37	289
Shared Lane Traffic (%)						
Lane Group Flow (vph)	224	32	374	0	0	326
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.3%		ICU Level of Service B	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	826	620	93	0	0
Future Volume (vph)	0	826	620	93	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	1900	1844	1552	0	0
Flt Permitted						
Satd. Flow (perm)	0	1900	1844	1552	0	0
Link Speed (mph)		30	40		25	
Link Distance (ft)		370	199		166	
Travel Time (s)		8.4	3.4		4.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	2%	0%	0%
Adj. Flow (vph)	0	918	689	103	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	918	689	103	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	46.8%	ICU Level of Service	A
Analysis Period (min)	15		



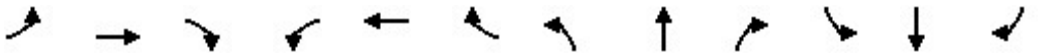
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	16	38	336	0	84	390
Future Volume (vph)	16	38	336	0	84	390
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Grade (%)	-1%		-4%			4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950					0.991
Satd. Flow (prot)	1778	1591	1773	0	0	1675
Flt Permitted	0.950					0.991
Satd. Flow (perm)	1778	1591	1773	0	0	1675
Link Speed (mph)	25		25			25
Link Distance (ft)	306		420			459
Travel Time (s)	8.3		11.5			12.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	18	42	373	0	93	433
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	42	373	0	0	526
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	1.07	1.07	1.12	1.12
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	39	297	13	0	406
Future Volume (vph)	0	39	297	13	0	406
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%		1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865	0.995			
Flt Protected						
Satd. Flow (prot)	0	1603	1844	0	0	1835
Flt Permitted						
Satd. Flow (perm)	0	1603	1844	0	0	1835
Link Speed (mph)	25		25			25
Link Distance (ft)	315		365			420
Travel Time (s)	8.6		10.0			11.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	2%	2%	2%	0%	3%
Adj. Flow (vph)	0	43	330	14	0	451
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	43	344	0	0	451
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	26.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	383	97	242	250	129	78	79	218	225	135	103
Future Volume (veh/h)	129	383	97	242	250	129	78	79	218	225	135	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1935	1906	1711	1697	1697	1837	1837	1809	1794	1866	1794
Adj Flow Rate, veh/h	137	407	89	257	266	76	83	84	182	239	144	95
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	1	3	0	1	1	0	0	2	0	0	0
Cap, veh/h	546	770	746	421	701	774	317	89	193	307	245	162
Arrive On Green	0.07	0.40	0.40	0.09	0.41	0.41	0.06	0.17	0.17	0.13	0.23	0.23
Sat Flow, veh/h	1856	1935	1616	1629	1697	1438	1750	517	1119	1709	1049	692
Grp Volume(v), veh/h	137	407	89	257	266	76	83	0	266	239	0	239
Grp Sat Flow(s),veh/h/ln	1856	1935	1616	1629	1697	1438	1750	0	1636	1709	0	1742
Q Serve(g_s), s	3.8	14.4	2.8	8.0	9.8	2.3	3.4	0.0	14.5	10.0	0.0	11.0
Cycle Q Clear(g_c), s	3.8	14.4	2.8	8.0	9.8	2.3	3.4	0.0	14.5	10.0	0.0	11.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.68	1.00		0.40
Lane Grp Cap(c), veh/h	546	770	746	421	701	774	317	0	282	307	0	407
V/C Ratio(X)	0.25	0.53	0.12	0.61	0.38	0.10	0.26	0.00	0.94	0.78	0.00	0.59
Avail Cap(c_a), veh/h	574	770	746	421	701	774	361	0	282	307	0	407
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.0	20.7	13.8	16.6	18.4	10.1	27.7	0.0	36.8	25.9	0.0	30.6
Incr Delay (d2), s/veh	0.2	2.6	0.3	2.6	1.6	0.3	0.4	0.0	38.8	12.0	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.7	10.8	1.9	5.7	7.0	1.4	2.6	0.0	13.6	8.5	0.0	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.3	23.3	14.1	19.2	20.0	10.4	28.2	0.0	75.6	37.9	0.0	32.8
LnGrp LOS	B	C	B	B	B	B	C	A	E	D	A	C
Approach Vol, veh/h		633			599			349			478	
Approach Delay, s/veh		20.0			18.4			64.3			35.4	
Approach LOS		C			B			E			D	

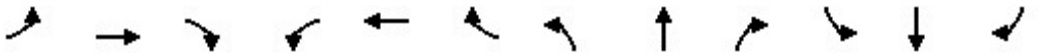
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	41.2	10.5	25.5	11.4	42.6	16.0	20.0
Change Period (Y+Rc), s	* 5.8	6.4	* 5.7	5.5	* 5.8	6.4	* 5.7	5.5
Max Green Setting (Gmax), s	* 7	34.8	* 7	17.8	* 7	34.8	* 10	14.5
Max Q Clear Time (g_c+I1), s	10.0	16.4	5.4	13.0	5.8	11.8	12.0	16.5
Green Ext Time (p_c), s	0.0	4.7	0.0	0.3	0.0	3.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	30.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



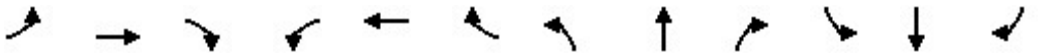
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	656	178	81	475	0	0	0	0	386	0	225
Future Volume (veh/h)	0	656	178	81	475	0	0	0	0	386	0	225
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1772	0				1860	1950	1860
Adj Flow Rate, veh/h	0	729	0	90	528	0				429	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	1	0	0	2	0				1	0	1
Cap, veh/h	0	901		284	1095	0				493	0	
Arrive On Green	0.00	0.50	0.00	0.05	0.62	0.00				0.27	0.00	0.00
Sat Flow, veh/h	0	1786	1525	1714	1772	0				1857	0	0
Grp Volume(v), veh/h	0	729	0	90	528	0				429	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1772	0				1857	0	0
Q Serve(g_s), s	0.0	30.8	0.0	2.1	14.6	0.0				19.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	30.8	0.0	2.1	14.6	0.0				19.9	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	901		284	1095	0				493	0	
V/C Ratio(X)	0.00	0.81		0.32	0.48	0.00				0.87	0.00	
Avail Cap(c_a), veh/h	0	901		346	1095	0				619	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.60	0.60	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	18.7	0.0	15.3	9.4	0.0				31.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	7.8	0.0	0.4	0.9	0.0				10.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	19.7	0.0	1.3	7.8	0.0				15.3	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	26.4	0.0	15.6	10.3	0.0				42.4	0.0	6.0
LnGrp LOS	A	C		B	B	A				D	A	A
Approach Vol, veh/h		729	A		618						573	A
Approach Delay, s/veh		26.4			11.1						33.2	
Approach LOS		C			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.2	50.9		28.9		61.1
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	35.0		29.0		48.5
Max Q Clear Time (g_c+I1), s	4.1	32.8		21.9		16.6
Green Ext Time (p_c), s	0.1	0.2		1.0		0.3

Intersection Summary	
HCM 6th Ctrl Delay	23.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	598	449	0	0	357	161	208	0	92	0	0	0
Future Volume (veh/h)	598	449	0	0	357	161	208	0	92	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1786	0	0	1772	1786	1823	1911	1795			
Adj Flow Rate, veh/h	695	522	0	0	415	0	242	0	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	1	1	0	0	2	1	1	0	3			
Cap, veh/h	758	1297	0	0	647		296	0				
Arrive On Green	0.20	0.49	0.00	0.00	0.37	0.00	0.16	0.00	0.00			
Sat Flow, veh/h	1701	1786	0	0	1772	1514	1820	0	0			
Grp Volume(v), veh/h	695	522	0	0	415	0	242	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1786	0	0	1772	1514	1820	0	0			
Q Serve(g_s), s	22.9	16.8	0.0	0.0	17.5	0.0	11.6	0.0	0.0			
Cycle Q Clear(g_c), s	22.9	16.8	0.0	0.0	17.5	0.0	11.6	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	758	1297	0	0	647		296	0				
V/C Ratio(X)	0.92	0.40	0.00	0.00	0.64		0.82	0.00				
Avail Cap(c_a), veh/h	844	1297	0	0	647		324	0				
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.20	0.20	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	18.8	10.6	0.0	0.0	23.7	0.0	36.4	0.0	0.0			
Incr Delay (d2), s/veh	3.5	0.2	0.0	0.0	4.8	0.0	14.0	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	11.7	8.9	0.0	0.0	12.2	0.0	10.3	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	22.2	10.8	0.0	0.0	28.5	0.0	50.4	0.0	6.0			
LnGrp LOS	C	B	A	A	C		D	A	A			
Approach Vol, veh/h		1217			415	A		349	A			
Approach Delay, s/veh		17.3			28.5			36.8				
Approach LOS		B			C			D				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		70.4		19.6	32.5	37.9			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		63.0		15.0	31.0	26.0			
Max Q Clear Time (g_c+I1), s		18.8		13.6	24.9	19.5			
Green Ext Time (p_c), s		0.3		0.1	1.6	0.2			

Intersection Summary	
HCM 6th Ctrl Delay	23.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	202	29	229	108	33	260
Future Vol, veh/h	202	29	229	108	33	260
Conflicting Peds, #/hr	0	0	0	0	121	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	224	32	254	120	37	289

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	798	435	0	0	495	0
Stage 1	435	-	-	-	-	-
Stage 2	363	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.3	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	396	657	-	-	811	-
Stage 1	660	-	-	-	-	-
Stage 2	805	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	335	591	-	-	729	-
Mov Cap-2 Maneuver	335	-	-	-	-	-
Stage 1	593	-	-	-	-	-
Stage 2	757	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	32.1	0	1.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	335	591	729	-
HCM Lane V/C Ratio	-	-	0.67	0.055	0.05	-
HCM Control Delay (s)	-	-	35.1	11.4	10.2	0
HCM Lane LOS	-	-	E	B	B	A
HCM 95th %tile Q(veh)	-	-	4.6	0.2	0.2	-

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	38	336	0	84	390
Future Vol, veh/h	16	38	336	0	84	390
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-4	-	-	4
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	18	42	373	0	93	433

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	992	373	0	0	373	0
Stage 1	373	-	-	-	-	-
Stage 2	619	-	-	-	-	-
Critical Hdwy	6.22	6.12	-	-	4.3	-
Critical Hdwy Stg 1	6.2	-	-	-	-	-
Critical Hdwy Stg 2	5.22	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	318	720	-	-	894	-
Stage 1	734	-	-	-	-	-
Stage 2	626	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	274	720	-	-	894	-
Mov Cap-2 Maneuver	274	-	-	-	-	-
Stage 1	734	-	-	-	-	-
Stage 2	540	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.9	0	1.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	274	720	894	-
HCM Lane V/C Ratio	-	-	0.065	0.059	0.104	-
HCM Control Delay (s)	-	-	19	10.3	9.5	0
HCM Lane LOS	-	-	C	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.2	0.3	-

Intersection	
Int Delay, s/veh	0.5

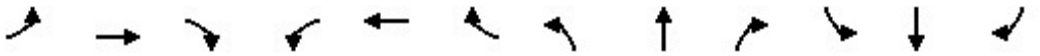
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	39	297	13	0	406
Future Vol, veh/h	0	39	297	13	0	406
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	1	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	2	2	0	3
Mvmt Flow	0	43	330	14	0	451

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	337	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.32	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	740	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	740	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

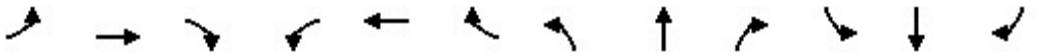
Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	740	-
HCM Lane V/C Ratio	-	-	0.059	-
HCM Control Delay (s)	-	-	10.2	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.2	-

2022 Opening Year Mitigation Scenario
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	129	383	97	242	250	129	78	79	218	225	135	103
Future Volume (vph)	129	383	97	242	250	129	78	79	218	225	135	103
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		225	200		185	175		200	260		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	50			75			100			0		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.970				0.850			0.850		0.935	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	3226	0	1620	1747	1485	1604	1809	1507	1645	1730	0
Flt Permitted	0.595			0.356			0.430			0.624		
Satd. Flow (perm)	1056	3226	0	607	1747	1485	726	1809	1507	1080	1730	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		43				137			190		50	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			370			459			336	
Travel Time (s)		14.1			6.3			12.5			6.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	3%	0%	1%	1%	0%	0%	2%	0%	0%	0%
Adj. Flow (vph)	137	407	103	257	266	137	83	84	232	239	144	110
Shared Lane Traffic (%)												
Lane Group Flow (vph)	137	510	0	257	266	137	83	84	232	239	254	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template												
Leading Detector (ft)	34	34		34	34	34	39	39	39	34	34	
Trailing Detector (ft)	-6	-6		-6	-6	-6	-6	-6	-6	-6	-6	
Detector 1 Position(ft)	-6	-6		-6	-6	-6	-6	-6	-6	-6	-6	
Detector 1 Size(ft)	40	40		40	40	40	45	45	45	40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6	7	3	8	1	7	4	
Permitted Phases	2			6		6	8		8	4		
Detector Phase	5	2		1	6	7	3	8	1	7	4	
Switch Phase												

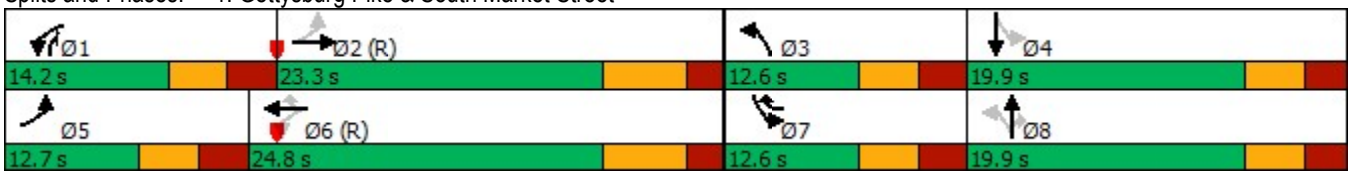


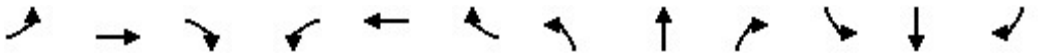
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.8	22.4		9.8	26.5	9.7	9.8	21.5	9.8	9.7	21.5	
Total Split (s)	12.7	23.3		14.2	24.8	12.6	12.6	19.9	14.2	12.6	19.9	
Total Split (%)	18.1%	33.3%		20.3%	35.4%	18.0%	18.0%	28.4%	20.3%	18.0%	28.4%	
Maximum Green (s)	7.0	16.9		8.5	18.4	7.0	7.0	14.5	8.5	7.0	14.5	
Yellow Time (s)	3.1	4.4		3.1	4.4	3.1	3.1	3.1	3.1	3.1	3.1	
All-Red Time (s)	2.6	2.0		2.6	2.0	2.5	2.5	2.3	2.6	2.5	2.3	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.7	5.4		4.7	5.4	4.6	4.6	4.4	4.7	4.6	4.4	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0		3.0	6.0	3.0	3.0	3.0	3.0	3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	25.0		0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	13.0		0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	None	None	None	None	None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			22.0			22.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	31.3	22.8		34.9	26.6	41.0	19.2	12.9	24.3	19.6	13.4	
Actuated g/C Ratio	0.45	0.33		0.50	0.38	0.59	0.27	0.18	0.35	0.28	0.19	
v/c Ratio	0.25	0.47		0.59	0.40	0.15	0.28	0.25	0.36	0.65	0.69	
Control Delay	11.8	20.8		14.6	15.7	0.7	16.6	25.0	5.2	26.6	30.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	11.8	20.8		14.6	15.7	0.7	16.6	25.0	5.2	26.6	30.7	
LOS	B	C		B	B	A	B	C	A	C	C	
Approach Delay		18.9			12.1			11.8			28.7	
Approach LOS		B			B			B			C	
Queue Length 50th (ft)	25	72		35	44	0	18	24	9	57	64	
Queue Length 95th (ft)	51	111		m68	m91	m1	38	52	40	99	120	
Internal Link Dist (ft)		747			290			379			256	
Turn Bay Length (ft)	175			200		185	175		200	260		
Base Capacity (vph)	547	1081		440	664	927	301	400	653	367	422	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.25	0.47		0.58	0.40	0.15	0.28	0.21	0.36	0.65	0.60	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 32 (46%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 17.8		Intersection LOS: B	
Intersection Capacity Utilization 63.0%		ICU Level of Service B	
Analysis Period (min) 15			

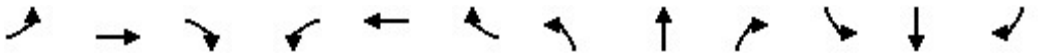
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	656	178	81	475	0	0	0	0	386	0	225
Future Volume (vph)	0	656	178	81	475	0	0	0	0	386	0	225
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	100		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	*0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.950	
Flt Protected				0.950							0.969	
Satd. Flow (prot)	0	3137	1530	1653	1765	0	0	0	0	0	1767	0
Flt Permitted				0.167							0.969	
Satd. Flow (perm)	0	3137	1530	291	1765	0	0	0	0	0	1767	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			198								156	
Link Speed (mph)		30			40			30			30	
Link Distance (ft)		199			608			453			537	
Travel Time (s)		4.5			10.4			10.3			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	0%	0%	0%	1%	0%	1%
Adj. Flow (vph)	0	729	198	90	528	0	0	0	0	429	0	250
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	729	198	90	528	0	0	0	0	0	679	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												



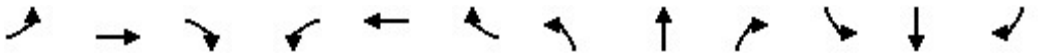
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		24.5	24.5	13.5	38.0					32.0	32.0	
Total Split (%)		35.0%	35.0%	19.3%	54.3%					45.7%	45.7%	
Maximum Green (s)		18.0	18.0	7.0	31.5					26.0	26.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		23.1	23.1	33.9	33.9						25.6	
Actuated g/C Ratio		0.33	0.33	0.48	0.48						0.37	
v/c Ratio		0.70	0.31	0.31	0.62						0.91	
Control Delay		27.5	7.6	4.4	8.2						34.7	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		27.5	7.6	4.4	8.2						34.7	
LOS		C	A	A	A						C	
Approach Delay		23.3			7.6						34.7	
Approach LOS		C			A						C	
Queue Length 50th (ft)		107	2	6	132						166	
Queue Length 95th (ft)		#203	m41	m6	m130						#331	
Internal Link Dist (ft)		119			528			373			457	
Turn Bay Length (ft)			125	100								
Base Capacity (vph)		1036	637	296	854						777	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.70	0.31	0.30	0.62						0.87	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 32 (46%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 22.4		Intersection LOS: C	
Intersection Capacity Utilization 85.4%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

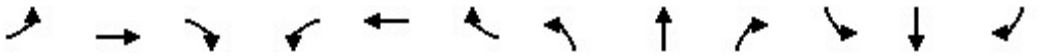
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US 15 SB Ramp





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	598	449	0	0	357	161	208	0	92	0	0	0
Future Volume (vph)	598	449	0	0	357	161	208	0	92	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	0		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	*1.00	*1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.959				
Flt Protected	0.950							0.966				
Satd. Flow (prot)	1693	1723	0	0	1765	1464	0	1759	0	0	0	0
Flt Permitted	0.228							0.966				
Satd. Flow (perm)	406	1723	0	0	1765	1464	0	1759	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						187		140				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	0%	0%	2%	1%	1%	0%	3%	0%	0%	0%
Adj. Flow (vph)	695	522	0	0	415	187	242	0	107	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	695	522	0	0	415	187	0	349	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		23			23			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												

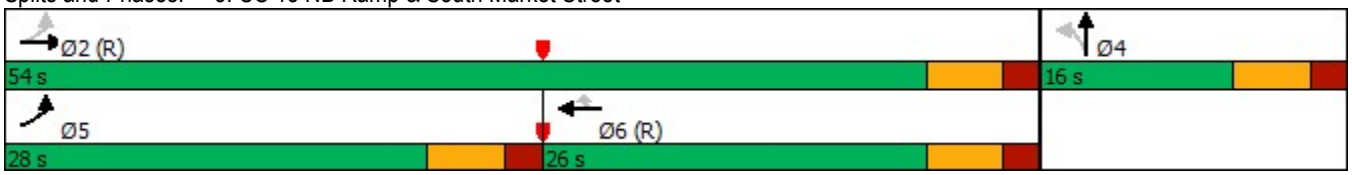


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	28.0	54.0			26.0	26.0	16.0	16.0				
Total Split (%)	40.0%	77.1%			37.1%	37.1%	22.9%	22.9%				
Maximum Green (s)	22.0	48.0			20.0	20.0	10.0	10.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	49.1	49.1			21.1	21.1		10.9				
Actuated g/C Ratio	0.70	0.70			0.30	0.30		0.16				
v/c Ratio	0.98	0.43			0.78	0.33		0.89				
Control Delay	35.9	2.5			34.9	5.1		44.9				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	35.9	2.5			34.9	5.1		44.9				
LOS	D	A			C	A		D				
Approach Delay		21.6			25.6			44.9				
Approach LOS		C			C			D				
Queue Length 50th (ft)	5	15			130	0		71				
Queue Length 95th (ft)	#269	m28			#219	29		#170				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)						260						
Base Capacity (vph)	707	1208			532	572		394				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.98	0.43			0.78	0.33		0.89				

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 26.4		Intersection LOS: C	
Intersection Capacity Utilization 85.4%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

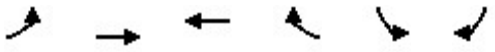
Splits and Phases: 3: US 15 NB Ramp & South Market Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	202	29	229	108	33	260
Future Volume (vph)	202	29	229	108	33	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		0%			1%
Storage Length (ft)	0	0		0	75	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.957			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1783	0	1761	1835
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	1783	0	1761	1835
Link Speed (mph)	25		25			35
Link Distance (ft)	189		336			230
Travel Time (s)	5.2		9.2			4.5
Confl. Peds. (#/hr)					121	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	224	32	254	120	37	289
Shared Lane Traffic (%)						
Lane Group Flow (vph)	224	32	374	0	37	289
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.2%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	826	620	93	0	0
Future Volume (vph)	0	826	620	93	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	4%		0%	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	3610	1844	1552	0	0
Flt Permitted						
Satd. Flow (perm)	0	3610	1844	1552	0	0
Link Speed (mph)		30	40		25	
Link Distance (ft)		370	199		166	
Travel Time (s)		8.4	3.4		4.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	2%	0%	0%
Adj. Flow (vph)	0	918	689	103	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	918	689	103	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	36.0%	ICU Level of Service	A
Analysis Period (min)	15		



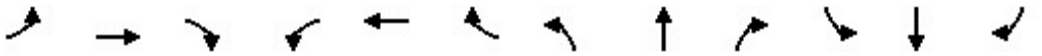
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	16	38	336	0	84	390
Future Volume (vph)	16	38	336	0	84	390
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Grade (%)	-1%		-4%			4%
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1778	1591	1773	0	1619	1687
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1778	1591	1773	0	1619	1687
Link Speed (mph)	25		25			25
Link Distance (ft)	306		420			459
Travel Time (s)	8.3		11.5			12.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	18	42	373	0	93	433
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	42	373	0	93	433
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	1.07	1.07	1.12	1.12
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	39	297	13	0	406
Future Volume (vph)	0	39	297	13	0	406
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%		1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865	0.995			
Flt Protected						
Satd. Flow (prot)	0	1603	1844	0	0	1835
Flt Permitted						
Satd. Flow (perm)	0	1603	1844	0	0	1835
Link Speed (mph)	25		25			25
Link Distance (ft)	315		365			420
Travel Time (s)	8.6		10.0			11.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	2%	2%	2%	0%	3%
Adj. Flow (vph)	0	43	330	14	0	451
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	43	344	0	0	451
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	26.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	383	97	242	250	129	78	79	218	225	135	103
Future Volume (veh/h)	129	383	97	242	250	129	78	79	218	225	135	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1935	1906	1711	1697	1697	1837	1837	1809	1794	1866	1794
Adj Flow Rate, veh/h	137	407	89	257	266	76	83	84	182	239	144	95
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	1	3	0	1	1	0	0	2	0	0	0
Cap, veh/h	549	994	215	509	647	713	294	269	432	411	201	133
Arrive On Green	0.08	0.33	0.33	0.14	0.38	0.38	0.07	0.15	0.15	0.11	0.19	0.19
Sat Flow, veh/h	1856	3005	651	1629	1697	1438	1750	1837	1533	1709	1049	692
Grp Volume(v), veh/h	137	248	248	257	266	76	83	84	182	239	0	239
Grp Sat Flow(s),veh/h/ln	1856	1838	1818	1629	1697	1438	1750	1837	1533	1709	0	1742
Q Serve(g_s), s	3.3	7.3	7.4	6.8	8.0	2.0	2.7	2.9	6.8	8.0	0.0	9.0
Cycle Q Clear(g_c), s	3.3	7.3	7.4	6.8	8.0	2.0	2.7	2.9	6.8	8.0	0.0	9.0
Prop In Lane	1.00		0.36	1.00		1.00	1.00		1.00	1.00		0.40
Lane Grp Cap(c), veh/h	549	608	601	509	647	713	294	269	432	411	0	334
V/C Ratio(X)	0.25	0.41	0.41	0.50	0.41	0.11	0.28	0.31	0.42	0.58	0.00	0.72
Avail Cap(c_a), veh/h	604	608	601	509	647	713	374	407	547	411	0	386
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.1	18.1	18.2	12.0	15.9	9.4	22.9	26.7	20.5	22.0	0.0	26.5
Incr Delay (d2), s/veh	0.2	2.0	2.1	0.8	1.9	0.3	0.5	0.7	0.7	2.1	0.0	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.2	5.6	5.6	3.9	5.6	1.1	2.0	2.3	4.3	5.9	0.0	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.3	20.1	20.2	12.8	17.8	9.7	23.4	27.4	21.1	24.1	0.0	31.8
LnGrp LOS	B	C	C	B	B	A	C	C	C	C	A	C
Approach Vol, veh/h		633			599			349			478	
Approach Delay, s/veh		18.7			14.6			23.2			27.9	
Approach LOS		B			B			C			C	

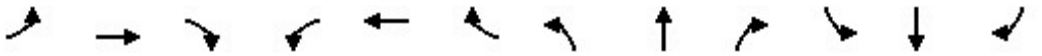
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.2	28.6	9.4	17.8	10.6	32.1	12.6	14.6
Change Period (Y+Rc), s	5.7	6.4	5.6	* 5.4	5.7	6.4	5.6	* 5.4
Max Green Setting (Gmax), s	8.5	16.9	7.0	* 15	7.0	18.4	7.0	* 15
Max Q Clear Time (g_c+I1), s	8.8	9.4	4.7	11.0	5.3	10.0	10.0	8.8
Green Ext Time (p_c), s	0.0	2.6	0.0	0.2	0.1	1.9	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	20.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



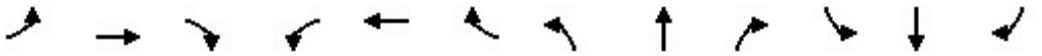
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	656	178	81	475	0	0	0	0	386	0	225
Future Volume (veh/h)	0	656	178	81	475	0	0	0	0	386	0	225
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1772	0				1860	1950	1860
Adj Flow Rate, veh/h	0	729	0	90	528	0				429	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	1	0	0	2	0				1	0	1
Cap, veh/h	0	1362		392	1016	0				514	0	
Arrive On Green	0.00	0.43	0.00	0.04	0.38	0.00				0.28	0.00	0.00
Sat Flow, veh/h	0	3358	1525	1714	1772	0				1857	0	0
Grp Volume(v), veh/h	0	729	0	90	528	0				429	0	0
Grp Sat Flow(s),veh/h/ln	0	1572	1525	1714	1772	0				1857	0	0
Q Serve(g_s), s	0.0	12.0	0.0	1.9	16.0	0.0				15.2	0.0	0.0
Cycle Q Clear(g_c), s	0.0	12.0	0.0	1.9	16.0	0.0				15.2	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1362		392	1016	0				514	0	
V/C Ratio(X)	0.00	0.54		0.23	0.52	0.00				0.84	0.00	
Avail Cap(c_a), veh/h	0	1362		482	1016	0				716	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.53	0.53	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	14.6	0.0	10.2	14.1	0.0				23.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.5	0.0	0.2	1.0	0.0				6.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	7.5	0.0	1.1	9.8	0.0				11.5	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	16.1	0.0	10.4	15.1	0.0				29.9	0.0	6.0
LnGrp LOS	A	B		B	B	A				C	A	A
Approach Vol, veh/h		729	A		618						573	A
Approach Delay, s/veh		16.1			14.5						23.9	
Approach LOS		B			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.8	35.8		24.4		45.6
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	18.0		26.0		31.5
Max Q Clear Time (g_c+I1), s	3.9	14.0		17.2		18.0
Green Ext Time (p_c), s	0.1	0.5		1.1		0.3

Intersection Summary	
HCM 6th Ctrl Delay	17.9
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	598	449	0	0	357	161	208	0	92	0	0	0
Future Volume (veh/h)	598	449	0	0	357	161	208	0	92	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1786	0	0	1772	1786	1823	1911	1795			
Adj Flow Rate, veh/h	695	522	0	0	415	0	242	0	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	1	1	0	0	2	1	1	0	3			
Cap, veh/h	734	1250	0	0	558		286	0				
Arrive On Green	0.42	0.93	0.00	0.00	0.31	0.00	0.16	0.00	0.00			
Sat Flow, veh/h	1701	1786	0	0	1772	1514	1820	0	0			
Grp Volume(v), veh/h	695	522	0	0	415	0	242	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1786	0	0	1772	1514	1820	0	0			
Q Serve(g_s), s	18.4	2.3	0.0	0.0	14.7	0.0	9.0	0.0	0.0			
Cycle Q Clear(g_c), s	18.4	2.3	0.0	0.0	14.7	0.0	9.0	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	734	1250	0	0	558		286	0				
V/C Ratio(X)	0.95	0.42	0.00	0.00	0.74		0.85	0.00				
Avail Cap(c_a), veh/h	759	1250	0	0	558		286	0				
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.65	0.65	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	9.3	0.8	0.0	0.0	21.5	0.0	28.7	0.0	0.0			
Incr Delay (d2), s/veh	15.1	0.7	0.0	0.0	8.7	0.0	20.3	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	9.4	1.0	0.0	0.0	11.0	0.0	9.2	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	24.3	1.5	0.0	0.0	30.2	0.0	49.0	0.0	6.0			
LnGrp LOS	C	A	A	A	C		D	A	A			
Approach Vol, veh/h		1217			415	A		349	A			
Approach Delay, s/veh		14.5			30.2			35.8				
Approach LOS		B			C			D				

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		54.0		16.0	27.0	27.0						
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0						
Max Green Setting (Gmax), s		48.0		10.0	22.0	20.0						
Max Q Clear Time (g_c+I1), s		4.3		11.0	20.4	16.7						
Green Ext Time (p_c), s		0.3		0.0	0.5	0.1						

Intersection Summary												
HCM 6th Ctrl Delay			21.6									
HCM 6th LOS			C									

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	8.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	202	29	229	108	33	260
Future Vol, veh/h	202	29	229	108	33	260
Conflicting Peds, #/hr	0	0	0	0	121	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	224	32	254	120	37	289

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	798	435	0	0	495	0
Stage 1	435	-	-	-	-	-
Stage 2	363	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.3	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	396	657	-	-	811	-
Stage 1	660	-	-	-	-	-
Stage 2	805	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	338	591	-	-	729	-
Mov Cap-2 Maneuver	338	-	-	-	-	-
Stage 1	593	-	-	-	-	-
Stage 2	764	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	31.5	0	1.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	338	591	729	-
HCM Lane V/C Ratio	-	-	0.664	0.055	0.05	-
HCM Control Delay (s)	-	-	34.4	11.4	10.2	-
HCM Lane LOS	-	-	D	B	B	-
HCM 95th %tile Q(veh)	-	-	4.5	0.2	0.2	-

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	38	336	0	84	390
Future Vol, veh/h	16	38	336	0	84	390
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-4	-	-	4
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	18	42	373	0	93	433

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	992	373	0	0	373	0
Stage 1	373	-	-	-	-	-
Stage 2	619	-	-	-	-	-
Critical Hdwy	6.22	6.12	-	-	4.3	-
Critical Hdwy Stg 1	6.2	-	-	-	-	-
Critical Hdwy Stg 2	5.22	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	318	720	-	-	894	-
Stage 1	734	-	-	-	-	-
Stage 2	626	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	285	720	-	-	894	-
Mov Cap-2 Maneuver	285	-	-	-	-	-
Stage 1	734	-	-	-	-	-
Stage 2	561	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.7	0	1.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	285	720	894	-
HCM Lane V/C Ratio	-	-	0.062	0.059	0.104	-
HCM Control Delay (s)	-	-	18.5	10.3	9.5	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.2	0.3	-

Intersection	
Int Delay, s/veh	0.5

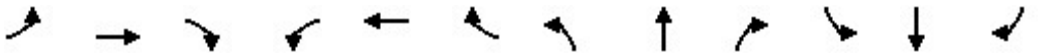
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	39	297	13	0	406
Future Vol, veh/h	0	39	297	13	0	406
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	1	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	2	2	0	3
Mvmt Flow	0	43	330	14	0	451

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	337	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.32	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	740	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	740	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

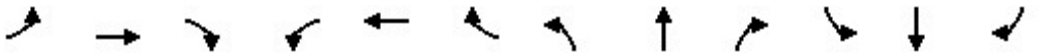
Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	740	-
HCM Lane V/C Ratio	-	-	0.059	-
HCM Control Delay (s)	-	-	10.2	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.2	-

2027 Horizon Year No Build Scenario
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	444	66	205	319	134	58	68	178	127	123	37
Future Volume (vph)	48	444	66	205	319	134	58	68	178	127	123	37
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		0	200		185	175		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	50			75			100			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981				0.850		0.891			0.966	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	1715	0	1620	1747	1485	1604	1578	0	1645	1788	0
Flt Permitted	0.538			0.253			0.582			0.385		
Satd. Flow (perm)	955	1715	0	431	1747	1485	983	1578	0	667	1788	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12				202		141			16	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			569			553			571	
Travel Time (s)		14.1			9.7			15.1			11.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	5%	0%	1%	1%	0%	0%	3%	0%	0%	0%
Adj. Flow (vph)	51	472	70	218	339	143	62	72	189	135	131	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	51	542	0	218	339	143	62	261	0	135	170	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	34	34		34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40		40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												

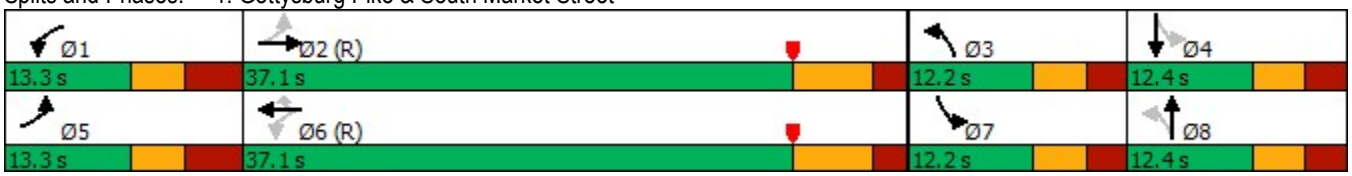


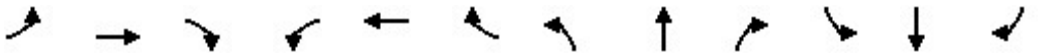
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0		3.0	10.0	10.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	10.6	39.6		9.6	16.6	16.6	10.5	9.5		9.5	9.5	
Total Split (s)	13.3	37.1		13.3	37.1	37.1	12.2	12.4		12.2	12.4	
Total Split (%)	17.7%	49.5%		17.7%	49.5%	49.5%	16.3%	16.5%		16.3%	16.5%	
Maximum Green (s)	7.0	30.7		7.0	30.7	30.7	7.0	7.0		7.0	7.0	
Yellow Time (s)	3.0	4.4		3.0	4.4	4.4	3.0	3.0		3.0	3.0	
All-Red Time (s)	3.3	2.0		3.3	2.0	2.0	2.2	2.4		2.2	2.4	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	5.3	5.4		5.3	5.4	5.4	4.2	4.4		4.2	4.4	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0		3.0	6.0	6.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0		0.0	25.0	25.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0		0.0	13.0	13.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		26.0			26.0	26.0		17.0			17.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	41.7	34.2		44.5	39.6	39.6	14.5	8.0		15.4	10.4	
Actuated g/C Ratio	0.56	0.46		0.59	0.53	0.53	0.19	0.11		0.21	0.14	
v/c Ratio	0.08	0.69		0.57	0.37	0.16	0.24	0.89		0.56	0.65	
Control Delay	6.8	22.7		11.2	6.5	0.4	23.5	48.8		32.2	43.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	6.8	22.7		11.2	6.5	0.4	23.5	48.8		32.2	43.1	
LOS	A	C		B	A	A	C	D		C	D	
Approach Delay		21.3			6.7			44.0			38.3	
Approach LOS		C			A			D			D	
Queue Length 50th (ft)	7	160		13	42	0	17	44		40	57	
Queue Length 95th (ft)	17	256		m36	m55	m0	40	#150		76	#142	
Internal Link Dist (ft)		747			489			473			491	
Turn Bay Length (ft)	175			200		185	175			150		
Base Capacity (vph)	616	788		382	921	878	257	294		241	263	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.08	0.69		0.57	0.37	0.16	0.24	0.89		0.56	0.65	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 22.5		Intersection LOS: C	
Intersection Capacity Utilization 79.7%		ICU Level of Service D	
Analysis Period (min) 15			

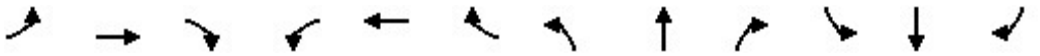
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	605	151	84	441	0	0	0	0	400	0	203
Future Volume (vph)	0	605	151	84	441	0	0	0	0	400	0	203
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	100		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.954	
Flt Protected				0.950							0.968	
Satd. Flow (prot)	0	1782	1530	1653	1765	0	0	0	0	0	1773	0
Flt Permitted				0.115							0.968	
Satd. Flow (perm)	0	1782	1530	200	1765	0	0	0	0	0	1773	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			139								145	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		569			608			453			537	
Travel Time (s)		9.7			10.4			10.3			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	0%	0%	0%	1%	0%	1%
Adj. Flow (vph)	0	672	168	93	490	0	0	0	0	444	0	226
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	672	168	93	490	0	0	0	0	0	670	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		33.5	33.5	13.5	47.0					28.0	28.0	
Total Split (%)		44.7%	44.7%	18.0%	62.7%					37.3%	37.3%	
Maximum Green (s)		27.0	27.0	7.0	40.5					22.0	22.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		30.7	30.7	41.5	41.5						23.0	
Actuated g/C Ratio		0.41	0.41	0.55	0.55						0.31	
v/c Ratio		0.92	0.24	0.36	0.50						1.04	
Control Delay		36.2	4.9	5.7	7.0						69.3	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		36.2	4.9	5.7	7.0						69.3	
LOS		D	A	A	A						E	
Approach Delay		29.9			6.8						69.3	
Approach LOS		C			A						E	
Queue Length 50th (ft)		~180	1	3	86						~233	
Queue Length 95th (ft)		m#401	m13	m4	m99						#395	
Internal Link Dist (ft)		489			528			373			457	
Turn Bay Length (ft)			125	100								
Base Capacity (vph)		730	709	265	976						644	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.92	0.24	0.35	0.50						1.04	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.04			
Intersection Signal Delay: 36.1		Intersection LOS: D	
Intersection Capacity Utilization 88.3%		ICU Level of Service E	
Analysis Period (min) 15			

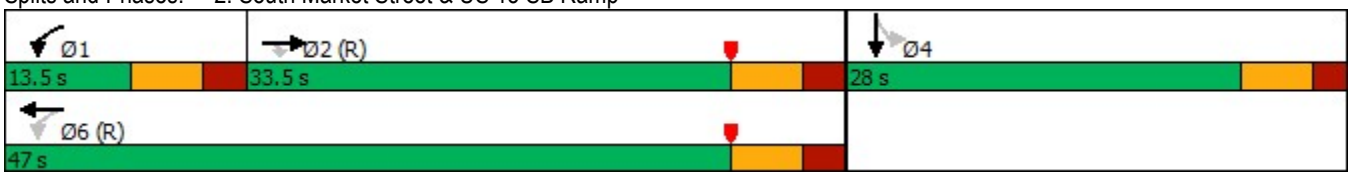
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

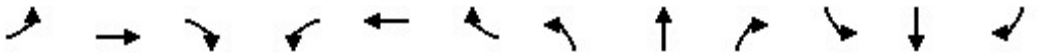
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US 15 SB Ramp



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	571	441	0	0	351	167	183	0	96	0	0	0
Future Volume (vph)	571	441	0	0	351	167	183	0	96	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.953				
Flt Protected	0.950							0.968				
Satd. Flow (prot)	1693	1723	0	0	1765	1464	0	1750	0	0	0	0
Flt Permitted	0.250							0.968				
Satd. Flow (perm)	446	1723	0	0	1765	1464	0	1750	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						194		131				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	0%	0%	2%	1%	1%	0%	3%	0%	0%	0%
Adj. Flow (vph)	664	513	0	0	408	194	213	0	112	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	664	513	0	0	408	194	0	325	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												

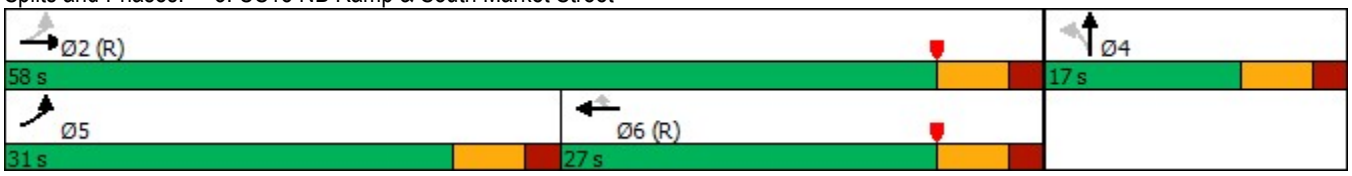


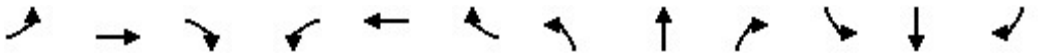
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	31.0	58.0			27.0	27.0	17.0	17.0				
Total Split (%)	41.3%	77.3%			36.0%	36.0%	22.7%	22.7%				
Maximum Green (s)	25.0	52.0			21.0	21.0	11.0	11.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	53.5	53.5			23.8	23.8		11.5				
Actuated g/C Ratio	0.71	0.71			0.32	0.32		0.15				
v/c Ratio	0.91	0.42			0.73	0.33		0.86				
Control Delay	18.1	1.4			33.3	5.1		41.3				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	18.1	1.4			33.3	5.1		41.3				
LOS	B	A			C	A		D				
Approach Delay		10.9			24.2			41.3				
Approach LOS		B			C			D				
Queue Length 50th (ft)	5	16			139	0		70				
Queue Length 95th (ft)	m5	m16			#229	31		#162				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	750	1228			559	596		390				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.89	0.42			0.73	0.33		0.83				

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 38 (51%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 19.4		Intersection LOS: B	
Intersection Capacity Utilization 88.3%		ICU Level of Service E	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: US15 NB Ramp & South Market Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	444	66	205	319	134	58	68	178	127	123	37
Future Volume (veh/h)	48	444	66	205	319	134	58	68	178	127	123	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1935	1878	1711	1697	1697	1837	1837	1795	1794	1866	1794
Adj Flow Rate, veh/h	51	472	59	218	339	126	62	72	109	135	131	20
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	1	5	0	1	1	0	0	3	0	0	0
Cap, veh/h	609	722	90	443	839	711	290	70	106	269	241	37
Arrive On Green	0.04	0.43	0.43	0.18	0.83	0.83	0.06	0.11	0.11	0.10	0.15	0.15
Sat Flow, veh/h	1856	1686	211	1629	1697	1438	1750	659	998	1709	1581	241
Grp Volume(v), veh/h	51	0	531	218	339	126	62	0	181	135	0	151
Grp Sat Flow(s),veh/h/ln	1856	0	1897	1629	1697	1438	1750	0	1658	1709	0	1823
Q Serve(g_s), s	1.1	0.0	16.7	5.3	3.9	1.3	2.3	0.0	8.0	5.0	0.0	5.7
Cycle Q Clear(g_c), s	1.1	0.0	16.7	5.3	3.9	1.3	2.3	0.0	8.0	5.0	0.0	5.7
Prop In Lane	1.00		0.11	1.00		1.00	1.00		0.60	1.00		0.13
Lane Grp Cap(c), veh/h	609	0	813	443	839	711	290	0	177	269	0	278
V/C Ratio(X)	0.08	0.00	0.65	0.49	0.40	0.18	0.21	0.00	1.02	0.50	0.00	0.54
Avail Cap(c_a), veh/h	731	0	813	443	839	711	380	0	177	278	0	278
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.86	0.86	0.86	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.9	0.0	17.0	10.5	3.7	3.4	27.3	0.0	33.5	25.1	0.0	29.4
Incr Delay (d2), s/veh	0.1	0.0	4.1	0.7	1.2	0.5	0.4	0.0	74.0	1.5	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	0.0	11.6	2.6	2.1	0.8	1.8	0.0	11.2	3.6	0.0	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.9	0.0	21.1	11.3	4.9	3.9	27.7	0.0	107.5	26.5	0.0	31.6
LnGrp LOS	B	A	C	B	A	A	C	A	F	C	A	C
Approach Vol, veh/h		582			683			243			286	
Approach Delay, s/veh		20.2			6.8			87.2			29.2	
Approach LOS		C			A			F			C	

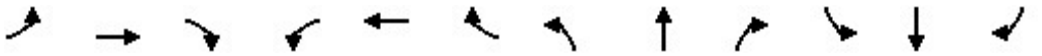
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	37.5	8.3	15.8	8.4	42.5	11.8	12.4
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 7	30.7	* 7	7.0	* 7	30.7	* 7	7.0
Max Q Clear Time (g_c+I1), s	7.3	18.7	4.3	7.7	3.1	5.9	7.0	10.0
Green Ext Time (p_c), s	0.0	4.2	0.0	0.0	0.0	5.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	25.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



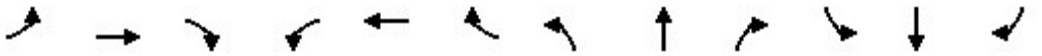
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	605	151	84	441	0	0	0	0	400	0	203
Future Volume (veh/h)	0	605	151	84	441	0	0	0	0	400	0	203
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1772	0				1860	1950	1860
Adj Flow Rate, veh/h	0	672	0	93	490	0				444	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	1	0	0	2	0				1	0	1
Cap, veh/h	0	808		293	1036	0				511	0	
Arrive On Green	0.00	0.45	0.00	0.08	0.78	0.00				0.28	0.00	0.00
Sat Flow, veh/h	0	1786	1525	1714	1772	0				1857	0	0
Grp Volume(v), veh/h	0	672	0	93	490	0				444	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1772	0				1857	0	0
Q Serve(g_s), s	0.0	24.8	0.0	2.0	7.3	0.0				17.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	24.8	0.0	2.0	7.3	0.0				17.1	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	808		293	1036	0				511	0	
V/C Ratio(X)	0.00	0.83		0.32	0.47	0.00				0.87	0.00	
Avail Cap(c_a), veh/h	0	808		374	1036	0				569	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.70	0.00	0.61	0.61	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	18.0	0.0	13.6	4.3	0.0				25.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	7.1	0.0	0.4	0.9	0.0				12.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	14.7	0.0	1.1	3.4	0.0				13.8	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	25.1	0.0	14.0	5.2	0.0				38.5	0.0	6.0
LnGrp LOS	A	C		B	A	A				D	A	A
Approach Vol, veh/h		672	A		583						670	A
Approach Delay, s/veh		25.1			6.6						27.6	
Approach LOS		C			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.0	39.4		25.6		49.4
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	27.0		22.0		40.5
Max Q Clear Time (g_c+I1), s	4.0	26.8		19.1		9.3
Green Ext Time (p_c), s	0.1	0.0		0.5		0.3

Intersection Summary		
HCM 6th Ctrl Delay		20.4
HCM 6th LOS		C

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	571	441	0	0	351	167	183	0	96	0	0	0
Future Volume (veh/h)	571	441	0	0	351	167	183	0	96	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1786	0	0	1772	1786	1823	1911	1795			
Adj Flow Rate, veh/h	664	513	0	0	408	0	213	0	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	1	1	0	0	2	1	1	0	3			
Cap, veh/h	745	1277	0	0	670		275	0				
Arrive On Green	0.27	0.72	0.00	0.00	0.38	0.00	0.15	0.00	0.00			
Sat Flow, veh/h	1701	1786	0	0	1772	1514	1820	0	0			
Grp Volume(v), veh/h	664	513	0	0	408	0	213	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1786	0	0	1772	1514	1820	0	0			
Q Serve(g_s), s	15.6	8.6	0.0	0.0	14.0	0.0	8.4	0.0	0.0			
Cycle Q Clear(g_c), s	15.6	8.6	0.0	0.0	14.0	0.0	8.4	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	745	1277	0	0	670		275	0				
V/C Ratio(X)	0.89	0.40	0.00	0.00	0.61		0.77	0.00				
Avail Cap(c_a), veh/h	875	1277	0	0	670		291	0				
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.27	0.27	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	10.6	4.3	0.0	0.0	18.8	0.0	30.6	0.0	0.0			
Incr Delay (d2), s/veh	3.1	0.3	0.0	0.0	4.1	0.0	11.6	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	6.1	3.1	0.0	0.0	9.8	0.0	7.9	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	13.7	4.5	0.0	0.0	22.9	0.0	42.2	0.0	6.0			
LnGrp LOS	B	A	A	A	C		D	A	A			
Approach Vol, veh/h		1177			408	A		325	A			
Approach Delay, s/veh		9.7			22.9			29.7				
Approach LOS		A			C			C				

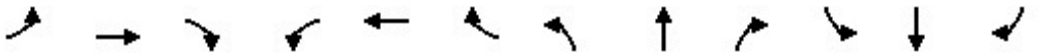
Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	58.6	16.4	25.3	33.4
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	52.0	11.0	25.0	21.0
Max Q Clear Time (g_c+I1), s	10.6	10.4	17.6	16.0
Green Ext Time (p_c), s	0.3	0.0	1.7	0.1

Intersection Summary	
HCM 6th Ctrl Delay	15.9
HCM 6th LOS	B

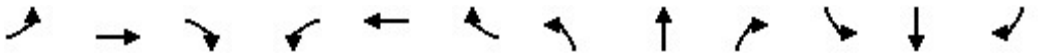
Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

2027 Horizon Year No Build Scenario
With Adjacent Development
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	476	73	205	329	134	60	68	178	127	123	38
Future Volume (vph)	51	476	73	205	329	134	60	68	178	127	123	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		225	200		185	175		0	150		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	50			75			100			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.891			0.965	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	1757	1437	1620	1747	1485	1604	1578	0	1645	1786	0
Flt Permitted	0.519			0.263			0.588			0.377		
Satd. Flow (perm)	921	1757	1437	448	1747	1485	993	1578	0	653	1786	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			121			143		141			16	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			569			553			571	
Travel Time (s)		14.1			9.7			15.1			11.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	5%	0%	1%	1%	0%	0%	3%	0%	0%	0%
Adj. Flow (vph)	54	506	78	218	350	143	64	72	189	135	131	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	506	78	218	350	143	64	261	0	135	171	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	34	34	34	34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6	-6	-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6	-6	-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40	40	40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	3	1	6	7	3	8		7	4	
Switch Phase												

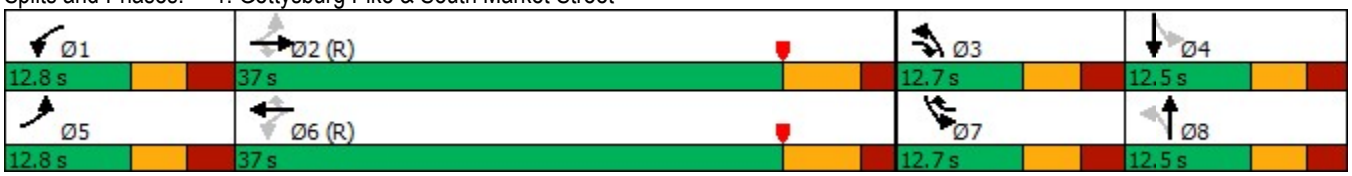


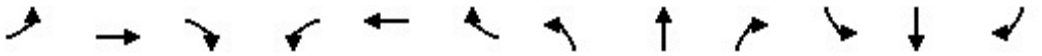
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0	3.0	3.0	10.0	3.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	10.6	39.6	10.5	9.6	16.6	9.5	10.5	9.5		9.5	9.5	
Total Split (s)	12.8	37.0	12.7	12.8	37.0	12.7	12.7	12.5		12.7	12.5	
Total Split (%)	17.1%	49.3%	16.9%	17.1%	49.3%	16.9%	16.9%	16.7%		16.9%	16.7%	
Maximum Green (s)	7.0	30.6	7.0	7.0	30.6	7.0	7.0	7.0		7.0	7.0	
Yellow Time (s)	3.2	4.4	3.2	3.2	4.4	3.2	3.2	3.2		3.2	3.2	
All-Red Time (s)	2.6	2.0	2.5	2.6	2.0	2.5	2.5	2.3		2.5	2.3	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.8	5.4	4.7	4.8	5.4	4.7	4.7	4.5		4.7	4.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0	3.0	3.0	6.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0	0.0	0.0	13.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max	None	None	C-Max	None	None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			22.0			22.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	39.6	31.6	44.7	42.2	36.8	50.2	15.5	8.0		16.8	10.6	
Actuated g/C Ratio	0.53	0.42	0.60	0.56	0.49	0.67	0.21	0.11		0.22	0.14	
v/c Ratio	0.10	0.68	0.09	0.58	0.41	0.14	0.24	0.89		0.54	0.65	
Control Delay	6.8	23.4	0.7	11.1	8.6	0.9	23.4	48.8		30.6	44.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	6.8	23.4	0.7	11.1	8.6	0.9	23.4	48.8		30.6	44.0	
LOS	A	C	A	B	A	A	C	D		C	D	
Approach Delay		19.3			7.8			43.8			38.1	
Approach LOS		B			A			D			D	
Queue Length 50th (ft)	7	148	0	15	44	0	18	44		40	58	
Queue Length 95th (ft)	18	234	6	m31	m76	m5	41	#150		76	#142	
Internal Link Dist (ft)		747			489			473			491	
Turn Bay Length (ft)	175		225	200		185	175			150		
Base Capacity (vph)	575	740	910	377	858	1042	274	294		251	265	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.09	0.68	0.09	0.58	0.41	0.14	0.23	0.89		0.54	0.65	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 54 (72%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 22.1		Intersection LOS: C	
Intersection Capacity Utilization 77.4%		ICU Level of Service D	
Analysis Period (min) 15			

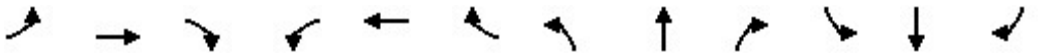
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	633	155	84	447	0	0	0	0	400	0	207
Future Volume (vph)	0	633	155	84	447	0	0	0	0	400	0	207
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	100		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.954	
Flt Protected				0.950							0.968	
Satd. Flow (prot)	0	1782	1530	1653	1765	0	0	0	0	0	1773	0
Flt Permitted				0.111							0.968	
Satd. Flow (perm)	0	1782	1530	193	1765	0	0	0	0	0	1773	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			139								145	
Link Speed (mph)		30			40			30			30	
Link Distance (ft)		569			608			453			537	
Travel Time (s)		12.9			10.4			10.3			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	0%	0%	0%	1%	0%	1%
Adj. Flow (vph)	0	703	172	93	497	0	0	0	0	444	0	230
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	703	172	93	497	0	0	0	0	0	674	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		34.5	34.5	13.5	48.0					27.0	27.0	
Total Split (%)		46.0%	46.0%	18.0%	64.0%					36.0%	36.0%	
Maximum Green (s)		28.0	28.0	7.0	41.5					21.0	21.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		31.8	31.8	42.5	42.5						22.0	
Actuated g/C Ratio		0.42	0.42	0.57	0.57						0.29	
v/c Ratio		0.93	0.24	0.36	0.50						1.08	
Control Delay		36.5	5.1	6.1	5.4						84.0	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		36.5	5.1	6.1	5.4						84.0	
LOS		D	A	A	A						F	
Approach Delay		30.4			5.5						84.0	
Approach LOS		C			A						F	
Queue Length 50th (ft)		~146	0	0	25						~245	
Queue Length 95th (ft)		m#417	m15	m7	m27						#406	
Internal Link Dist (ft)		489			528			373			457	
Turn Bay Length (ft)			125	100								
Base Capacity (vph)		754	727	265	1000						622	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.93	0.24	0.35	0.50						1.08	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 26 (35%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.08			
Intersection Signal Delay: 40.4		Intersection LOS: D	
Intersection Capacity Utilization 90.2%		ICU Level of Service E	
Analysis Period (min) 15			

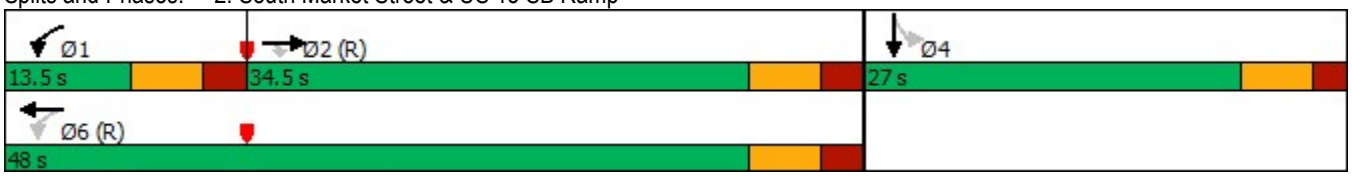
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

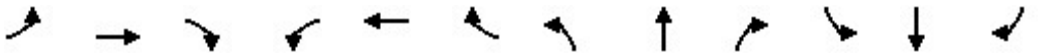
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

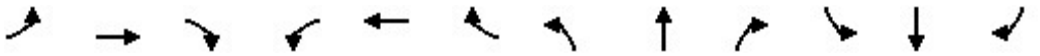
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US 15 SB Ramp





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	587	453	0	0	355	167	185	0	96	0	0	0
Future Volume (vph)	587	453	0	0	355	167	185	0	96	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.954				
Flt Protected	0.950							0.968				
Satd. Flow (prot)	1693	1723	0	0	1765	1464	0	1752	0	0	0	0
Flt Permitted	0.265							0.968				
Satd. Flow (perm)	472	1723	0	0	1765	1464	0	1752	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						194		131				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	0%	0%	2%	1%	1%	0%	3%	0%	0%	0%
Adj. Flow (vph)	683	527	0	0	413	194	215	0	112	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	683	527	0	0	413	194	0	327	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												

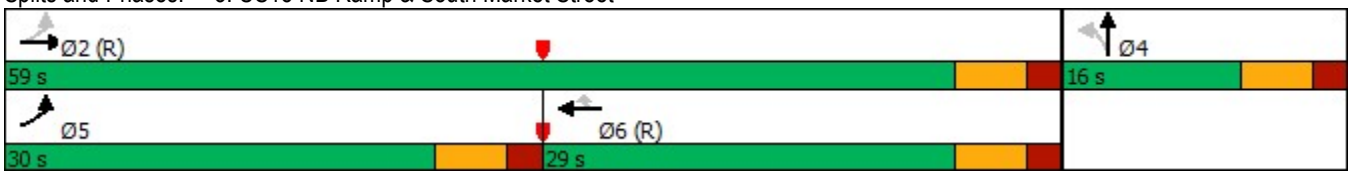


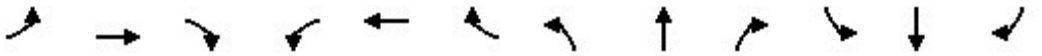
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	30.0	59.0			29.0	29.0	16.0	16.0				
Total Split (%)	40.0%	78.7%			38.7%	38.7%	21.3%	21.3%				
Maximum Green (s)	24.0	53.0			23.0	23.0	10.0	10.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	54.1	54.1			25.2	25.2		10.9				
Actuated g/C Ratio	0.72	0.72			0.34	0.34		0.15				
v/c Ratio	0.94	0.42			0.70	0.31		0.89				
Control Delay	23.3	1.1			30.0	4.7		47.7				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	23.3	1.1			30.0	4.7		47.7				
LOS	C	A			C	A		D				
Approach Delay		13.6			21.9			47.7				
Approach LOS		B			C			D				
Queue Length 50th (ft)	17	11			135	0		72				
Queue Length 95th (ft)	m15	m11			202	30		#171				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	747	1242			591	620		368				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.91	0.42			0.70	0.31		0.89				

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 72 (96%), Referenced to phase 2:EBTL and 6:WBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 21.2		Intersection LOS: C	
Intersection Capacity Utilization 90.2%		ICU Level of Service E	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: US15 NB Ramp & South Market Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	476	73	205	329	134	60	68	178	127	123	38
Future Volume (veh/h)	51	476	73	205	329	134	60	68	178	127	123	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1935	1878	1711	1697	1697	1837	1837	1795	1794	1866	1794
Adj Flow Rate, veh/h	54	506	67	218	350	126	64	72	109	135	131	21
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	1	5	0	1	1	0	0	3	0	0	0
Cap, veh/h	605	825	769	451	833	852	290	70	106	269	238	38
Arrive On Green	0.04	0.43	0.43	0.18	0.82	0.82	0.06	0.11	0.11	0.10	0.15	0.15
Sat Flow, veh/h	1856	1935	1591	1629	1697	1438	1750	659	998	1709	1569	252
Grp Volume(v), veh/h	54	506	67	218	350	126	64	0	181	135	0	152
Grp Sat Flow(s),veh/h/ln	1856	1935	1591	1629	1697	1438	1750	0	1658	1709	0	1821
Q Serve(g_s), s	1.2	15.2	1.7	5.2	4.3	1.1	2.4	0.0	8.0	5.0	0.0	5.8
Cycle Q Clear(g_c), s	1.2	15.2	1.7	5.2	4.3	1.1	2.4	0.0	8.0	5.0	0.0	5.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.60	1.00		0.14
Lane Grp Cap(c), veh/h	605	825	769	451	833	852	290	0	177	269	0	276
V/C Ratio(X)	0.09	0.61	0.09	0.48	0.42	0.15	0.22	0.00	1.02	0.50	0.00	0.55
Avail Cap(c_a), veh/h	725	825	769	451	833	852	378	0	177	278	0	276
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.86	0.86	0.86	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.9	16.7	10.5	10.2	3.8	2.3	27.3	0.0	33.5	25.5	0.0	29.5
Incr Delay (d2), s/veh	0.1	3.4	0.2	0.7	1.3	0.3	0.4	0.0	74.0	1.4	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	10.9	1.1	2.5	2.3	0.6	1.8	0.0	11.2	3.7	0.0	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.0	20.1	10.7	10.9	5.2	2.6	27.7	0.0	107.5	26.9	0.0	31.8
LnGrp LOS	B	C	B	B	A	A	C	A	F	C	A	C
Approach Vol, veh/h		627			694			245			287	
Approach Delay, s/veh		18.3			6.5			86.7			29.5	
Approach LOS		B			A			F			C	

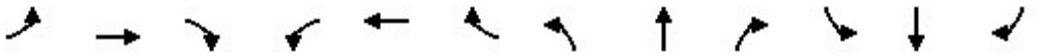
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	37.4	8.9	15.9	8.0	42.2	12.3	12.5
Change Period (Y+Rc), s	* 5.8	6.4	* 5.7	5.5	* 5.8	6.4	* 5.7	5.5
Max Green Setting (Gmax), s	* 7	30.6	* 7	7.0	* 7	30.6	* 7	7.0
Max Q Clear Time (g_c+I1), s	7.2	17.2	4.4	7.8	3.2	6.3	7.0	10.0
Green Ext Time (p_c), s	0.0	4.7	0.0	0.0	0.0	5.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	24.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



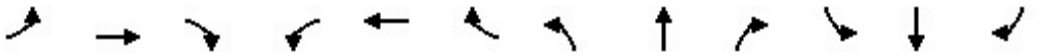
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	633	155	84	447	0	0	0	0	400	0	207
Future Volume (veh/h)	0	633	155	84	447	0	0	0	0	400	0	207
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1772	0				1860	1950	1860
Adj Flow Rate, veh/h	0	703	0	93	497	0				444	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	1	0	0	2	0				1	0	1
Cap, veh/h	0	811		273	1040	0				507	0	
Arrive On Green	0.00	0.45	0.00	0.06	0.59	0.00				0.27	0.00	0.00
Sat Flow, veh/h	0	1786	1525	1714	1772	0				1857	0	0
Grp Volume(v), veh/h	0	703	0	93	497	0				444	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1772	0				1857	0	0
Q Serve(g_s), s	0.0	26.6	0.0	2.0	12.1	0.0				17.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	26.6	0.0	2.0	12.1	0.0				17.1	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	811		273	1040	0				507	0	
V/C Ratio(X)	0.00	0.87		0.34	0.48	0.00				0.87	0.00	
Avail Cap(c_a), veh/h	0	811		354	1040	0				545	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.71	0.00	0.65	0.65	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	18.4	0.0	14.6	8.9	0.0				26.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	8.9	0.0	0.5	1.0	0.0				14.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	16.6	0.0	1.2	6.5	0.0				14.1	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	27.4	0.0	15.1	9.9	0.0				40.1	0.0	6.0
LnGrp LOS	A	C		B	A	A				D	A	A
Approach Vol, veh/h		703	A		590						674	A
Approach Delay, s/veh		27.4			10.7						28.5	
Approach LOS		C			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.0	39.5		25.5		49.5
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	28.0		21.0		41.5
Max Q Clear Time (g_c+I1), s	4.0	28.6		19.1		14.1
Green Ext Time (p_c), s	0.1	0.0		0.4		0.3

Intersection Summary	
HCM 6th Ctrl Delay	22.8
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	587	453	0	0	355	167	185	0	96	0	0	0
Future Volume (veh/h)	587	453	0	0	355	167	185	0	96	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1786	0	0	1772	1786	1823	1911	1795			
Adj Flow Rate, veh/h	683	527	0	0	413	0	215	0	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	1	1	0	0	2	1	1	0	3			
Cap, veh/h	755	1286	0	0	649		267	0				
Arrive On Green	0.19	0.48	0.00	0.00	0.37	0.00	0.15	0.00	0.00			
Sat Flow, veh/h	1701	1786	0	0	1772	1514	1820	0	0			
Grp Volume(v), veh/h	683	527	0	0	413	0	215	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1786	0	0	1772	1514	1820	0	0			
Q Serve(g_s), s	17.2	14.3	0.0	0.0	14.4	0.0	8.6	0.0	0.0			
Cycle Q Clear(g_c), s	17.2	14.3	0.0	0.0	14.4	0.0	8.6	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	755	1286	0	0	649		267	0				
V/C Ratio(X)	0.91	0.41	0.00	0.00	0.64		0.81	0.00				
Avail Cap(c_a), veh/h	834	1286	0	0	649		267	0				
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.25	0.25	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	14.2	9.1	0.0	0.0	19.6	0.0	31.0	0.0	0.0			
Incr Delay (d2), s/veh	3.8	0.2	0.0	0.0	4.7	0.0	16.4	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	9.0	7.3	0.0	0.0	10.2	0.0	8.4	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	17.9	9.4	0.0	0.0	24.3	0.0	47.3	0.0	6.0			
LnGrp LOS	B	A	A	A	C		D	A	A			
Approach Vol, veh/h		1210			413	A		327	A			
Approach Delay, s/veh		14.2			24.3			33.2				
Approach LOS		B			C			C				

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	59.0	16.0	26.5	32.5
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	53.0	10.0	24.0	23.0
Max Q Clear Time (g_c+I1), s	16.3	10.6	19.2	16.4
Green Ext Time (p_c), s	0.3	0.0	1.3	0.2

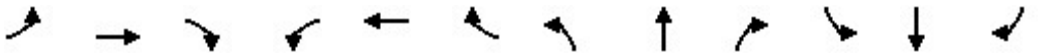
Intersection Summary	
HCM 6th Ctrl Delay	19.5
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

2027 Horizon Year Build Scenario
PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	127	367	92	249	251	134	78	81	224	229	139	103
Future Volume (vph)	127	367	92	249	251	134	78	81	224	229	139	103
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		0	200		185	175		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	50			75			100			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.970				0.850		0.890			0.936	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	1698	0	1620	1747	1485	1604	1587	0	1645	1732	0
Flt Permitted	0.531			0.289			0.480			0.201		
Satd. Flow (perm)	942	1698	0	493	1747	1485	810	1587	0	348	1732	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17				168		134			37	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			370			459			336	
Travel Time (s)		14.1			6.3			12.5			6.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	3%	0%	1%	1%	0%	0%	2%	0%	0%	0%
Adj. Flow (vph)	135	390	98	265	267	143	83	86	238	244	148	110
Shared Lane Traffic (%)												
Lane Group Flow (vph)	135	488	0	265	267	143	83	324	0	244	258	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	34	34		34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40		40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0		3.0	10.0	10.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	10.6	39.6		9.6	16.6	16.6	10.5	9.5		9.5	9.5	
Total Split (s)	13.3	41.7		13.3	41.7	41.7	12.2	20.0		15.0	22.8	
Total Split (%)	14.8%	46.3%		14.8%	46.3%	46.3%	13.6%	22.2%		16.7%	25.3%	
Maximum Green (s)	7.0	35.3		7.0	35.3	35.3	7.0	14.6		9.8	17.4	
Yellow Time (s)	3.0	4.4		3.0	4.4	4.4	3.0	3.0		3.0	3.0	
All-Red Time (s)	3.3	2.0		3.3	2.0	2.0	2.2	2.4		2.2	2.4	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	5.3	5.4		5.3	5.4	5.4	4.2	4.4		4.2	4.4	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0		3.0	6.0	6.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0		0.0	25.0	25.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0		0.0	13.0	13.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		26.0			26.0	26.0		17.0			17.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	45.2	37.2		45.5	37.4	37.4	22.6	14.7		28.7	19.9	
Actuated g/C Ratio	0.50	0.41		0.51	0.42	0.42	0.25	0.16		0.32	0.22	
v/c Ratio	0.25	0.69		0.76	0.37	0.20	0.31	0.88		0.92	0.63	
Control Delay	11.2	27.2		20.0	9.5	0.7	24.2	46.5		64.4	35.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	11.2	27.2		20.0	9.5	0.7	24.2	46.5		64.4	35.5	
LOS	B	C		B	A	A	C	D		E	D	
Approach Delay		23.7			11.7			42.0			49.6	
Approach LOS		C			B			D			D	
Queue Length 50th (ft)	28	175		27	42	0	26	85		85	93	
Queue Length 95th (ft)	51	268		m#66	m57	m1	53	#202		#187	160	
Internal Link Dist (ft)		747			290			379			256	
Turn Bay Length (ft)	175			200		185	175			150		
Base Capacity (vph)	540	712		349	725	714	276	385		266	411	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.25	0.69		0.76	0.37	0.20	0.30	0.84		0.92	0.63	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 86 (96%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 29.3		Intersection LOS: C	
Intersection Capacity Utilization 89.4%		ICU Level of Service E	
Analysis Period (min) 15			

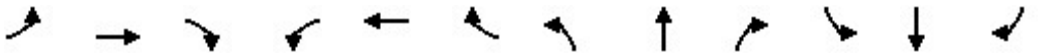
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	649	180	84	485	0	0	0	0	400	0	228
Future Volume (vph)	0	649	180	84	485	0	0	0	0	400	0	228
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	100		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.951	
Flt Protected				0.950							0.969	
Satd. Flow (prot)	0	1782	1530	1653	1765	0	0	0	0	0	1769	0
Flt Permitted				0.093							0.969	
Satd. Flow (perm)	0	1782	1530	162	1765	0	0	0	0	0	1769	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			134								121	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		199			608			453			537	
Travel Time (s)		3.4			10.4			10.3			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	0%	0%	0%	1%	0%	1%
Adj. Flow (vph)	0	721	200	93	539	0	0	0	0	444	0	253
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	721	200	93	539	0	0	0	0	0	697	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		41.5	41.5	13.5	55.0					35.0	35.0	
Total Split (%)		46.1%	46.1%	15.0%	61.1%					38.9%	38.9%	
Maximum Green (s)		35.0	35.0	7.0	48.5					29.0	29.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		38.7	38.7	49.5	49.5						30.0	
Actuated g/C Ratio		0.43	0.43	0.55	0.55						0.33	
v/c Ratio		0.94	0.27	0.43	0.56						1.04	
Control Delay		42.4	8.7	8.9	8.9						72.0	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		42.4	8.7	8.9	8.9						72.0	
LOS		D	A	A	A						E	
Approach Delay		35.1			8.9						72.0	
Approach LOS		D			A						E	
Queue Length 50th (ft)		~357	22	14	167						~306	
Queue Length 95th (ft)		m#482	m40	m15	m210						#480	
Internal Link Dist (ft)		119			528			373			457	
Turn Bay Length (ft)			125	100								
Base Capacity (vph)		766	734	221	970						670	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.94	0.27	0.42	0.56						1.04	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.04			
Intersection Signal Delay: 39.2		Intersection LOS: D	
Intersection Capacity Utilization 92.4%		ICU Level of Service F	
Analysis Period (min) 15			

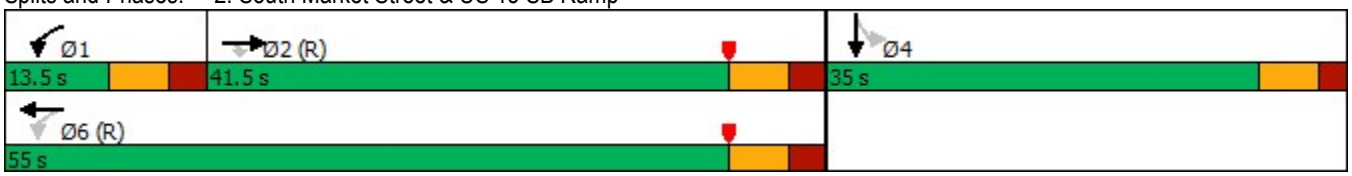
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

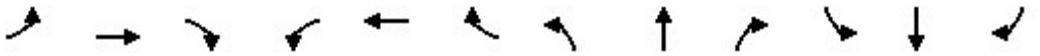
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US 15 SB Ramp



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	603	453	0	0	366	167	212	0	96	0	0	0
Future Volume (vph)	603	453	0	0	366	167	212	0	96	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.958				
Flt Protected	0.950							0.967				
Satd. Flow (prot)	1693	1723	0	0	1765	1464	0	1759	0	0	0	0
Flt Permitted	0.215							0.967				
Satd. Flow (perm)	383	1723	0	0	1765	1464	0	1759	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						194		109				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	0%	0%	2%	1%	1%	0%	3%	0%	0%	0%
Adj. Flow (vph)	701	527	0	0	426	194	247	0	112	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	701	527	0	0	426	194	0	359	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												



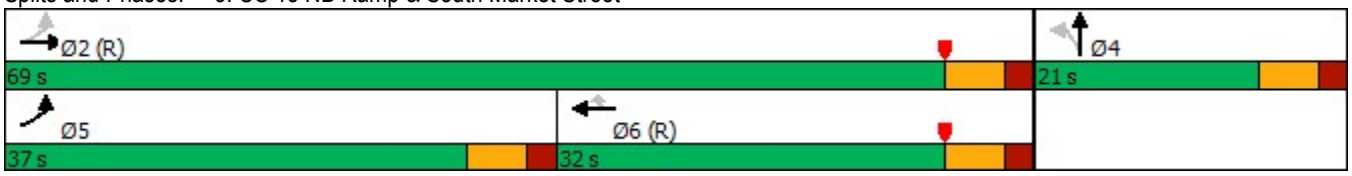
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	37.0	69.0			32.0	32.0	21.0	21.0				
Total Split (%)	41.1%	76.7%			35.6%	35.6%	23.3%	23.3%				
Maximum Green (s)	31.0	63.0			26.0	26.0	15.0	15.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	64.4	64.4			28.0	28.0		15.6				
Actuated g/C Ratio	0.72	0.72			0.31	0.31		0.17				
v/c Ratio	0.96	0.43			0.78	0.33		0.91				
Control Delay	28.3	1.2			40.2	5.4		54.1				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	28.3	1.2			40.2	5.4		54.1				
LOS	C	A			D	A		D				
Approach Delay		16.7			29.3			54.1				
Approach LOS		B			C			D				
Queue Length 50th (ft)	164	15			178	0		114				
Queue Length 95th (ft)	m125	m15			#274	33		#222				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	740	1232			548	589		402				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.95	0.43			0.78	0.33		0.89				

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 46 (51%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 26.3		Intersection LOS: C	
Intersection Capacity Utilization 92.4%		ICU Level of Service F	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

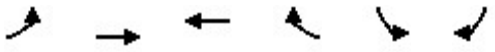
Splits and Phases: 3: US 15 NB Ramp & South Market Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	202	29	235	108	33	269
Future Volume (vph)	202	29	235	108	33	269
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		0%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.957			
Flt Protected	0.950					0.995
Satd. Flow (prot)	1770	1583	1783	0	0	1828
Flt Permitted	0.950					0.995
Satd. Flow (perm)	1770	1583	1783	0	0	1828
Link Speed (mph)	25		25			35
Link Distance (ft)	189		336			230
Travel Time (s)	5.2		9.2			4.5
Confl. Peds. (#/hr)					121	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	224	32	261	120	37	299
Shared Lane Traffic (%)						
Lane Group Flow (vph)	224	32	381	0	0	336
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.1%		ICU Level of Service B	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	820	634	93	0	0
Future Volume (vph)	0	820	634	93	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	1900	1844	1552	0	0
Flt Permitted						
Satd. Flow (perm)	0	1900	1844	1552	0	0
Link Speed (mph)		30	40		25	
Link Distance (ft)		370	199		166	
Travel Time (s)		8.4	3.4		4.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	2%	0%	0%
Adj. Flow (vph)	0	911	704	103	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	911	704	103	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	16	38	345	0	84	397
Future Volume (vph)	16	38	345	0	84	397
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	10	10	10	10
Grade (%)	-1%		-4%			4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950					0.991
Satd. Flow (prot)	1685	1507	1680	0	0	1587
Flt Permitted	0.950					0.991
Satd. Flow (perm)	1685	1507	1680	0	0	1587
Link Speed (mph)	25		25			25
Link Distance (ft)	306		420			459
Travel Time (s)	8.3		11.5			12.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	18	42	383	0	93	441
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	42	383	0	0	534
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.14	1.14	1.20	1.20
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	39	306	13	0	413
Future Volume (vph)	0	39	306	13	0	413
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%		1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865	0.995			
Flt Protected						
Satd. Flow (prot)	0	1603	1844	0	0	1835
Flt Permitted						
Satd. Flow (perm)	0	1603	1844	0	0	1835
Link Speed (mph)	25		25			25
Link Distance (ft)	315		365			420
Travel Time (s)	8.6		10.0			11.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	2%	2%	2%	0%	3%
Adj. Flow (vph)	0	43	340	14	0	459
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	43	354	0	0	459
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	26.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	367	92	249	251	134	78	81	224	229	139	103
Future Volume (veh/h)	127	367	92	249	251	134	78	81	224	229	139	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1935	1906	1711	1697	1697	1837	1837	1809	1794	1866	1794
Adj Flow Rate, veh/h	135	390	84	265	267	82	83	86	188	244	148	95
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	1	3	0	1	1	0	0	2	0	0	0
Cap, veh/h	549	622	134	394	712	603	309	89	194	292	244	156
Arrive On Green	0.07	0.40	0.40	0.09	0.42	0.42	0.06	0.17	0.17	0.12	0.23	0.23
Sat Flow, veh/h	1856	1543	332	1629	1697	1438	1750	513	1122	1709	1062	682
Grp Volume(v), veh/h	135	0	474	265	267	82	83	0	274	244	0	243
Grp Sat Flow(s),veh/h/ln	1856	0	1875	1629	1697	1438	1750	0	1635	1709	0	1744
Q Serve(g_s), s	3.7	0.0	18.2	8.0	9.8	3.2	3.4	0.0	15.0	10.3	0.0	11.2
Cycle Q Clear(g_c), s	3.7	0.0	18.2	8.0	9.8	3.2	3.4	0.0	15.0	10.3	0.0	11.2
Prop In Lane	1.00		0.18	1.00		1.00	1.00		0.69	1.00		0.39
Lane Grp Cap(c), veh/h	549	0	756	394	712	603	309	0	283	292	0	400
V/C Ratio(X)	0.25	0.00	0.63	0.67	0.38	0.14	0.27	0.00	0.97	0.83	0.00	0.61
Avail Cap(c_a), veh/h	580	0	756	394	712	603	352	0	283	292	0	400
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.8	0.0	21.4	17.9	18.0	16.1	27.7	0.0	36.9	26.3	0.0	31.1
Incr Delay (d2), s/veh	0.2	0.0	3.9	4.4	1.5	0.5	0.5	0.0	44.2	18.4	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.6	0.0	12.8	6.2	6.9	2.0	2.6	0.0	14.4	9.3	0.0	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.0	0.0	25.3	22.3	19.5	16.5	28.2	0.0	81.2	44.7	0.0	33.7
LnGrp LOS	B	A	C	C	B	B	C	A	F	D	A	C
Approach Vol, veh/h		609			614			357			487	
Approach Delay, s/veh		22.8			20.3			68.8			39.2	
Approach LOS		C			C			E			D	

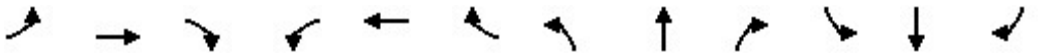
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	41.7	10.0	25.0	11.8	43.2	15.0	20.0
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 7	35.3	* 7	17.4	* 7	35.3	* 9.8	14.6
Max Q Clear Time (g_c+I1), s	10.0	20.2	5.4	13.2	5.7	11.8	12.3	17.0
Green Ext Time (p_c), s	0.0	4.2	0.0	0.3	0.0	3.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	33.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



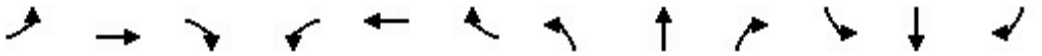
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	649	180	84	485	0	0	0	0	400	0	228
Future Volume (veh/h)	0	649	180	84	485	0	0	0	0	400	0	228
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1772	0				1860	1950	1860
Adj Flow Rate, veh/h	0	721	0	93	539	0				444	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	1	0	0	2	0				1	0	1
Cap, veh/h	0	885		281	1082	0				507	0	
Arrive On Green	0.00	0.50	0.00	0.07	0.81	0.00				0.27	0.00	0.00
Sat Flow, veh/h	0	1786	1525	1714	1772	0				1857	0	0
Grp Volume(v), veh/h	0	721	0	93	539	0				444	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1772	0				1857	0	0
Q Serve(g_s), s	0.0	30.7	0.0	2.2	8.6	0.0				20.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	30.7	0.0	2.2	8.6	0.0				20.6	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	885		281	1082	0				507	0	
V/C Ratio(X)	0.00	0.81		0.33	0.50	0.00				0.88	0.00	
Avail Cap(c_a), veh/h	0	885		341	1082	0				619	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.54	0.54	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	19.2	0.0	15.3	4.1	0.0				31.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	8.1	0.0	0.4	0.9	0.0				11.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	19.2	0.0	1.3	4.0	0.0				15.9	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	27.4	0.0	15.7	5.0	0.0				42.9	0.0	6.0
LnGrp LOS	A	C		B	A	A				D	A	A
Approach Vol, veh/h		721	A		632						591	A
Approach Delay, s/veh		27.4			6.6						33.7	
Approach LOS		C			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.3	50.1		29.6		60.4
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	35.0		29.0		48.5
Max Q Clear Time (g_c+I1), s	4.2	32.7		22.6		10.6
Green Ext Time (p_c), s	0.1	0.2		1.0		0.3

Intersection Summary	
HCM 6th Ctrl Delay	22.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	603	453	0	0	366	167	212	0	96	0	0	0
Future Volume (veh/h)	603	453	0	0	366	167	212	0	96	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1786	0	0	1772	1786	1823	1911	1795			
Adj Flow Rate, veh/h	701	527	0	0	426	0	247	0	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	1	1	0	0	2	1	1	0	3			
Cap, veh/h	757	1292	0	0	606		301	0				
Arrive On Green	0.22	0.48	0.00	0.00	0.34	0.00	0.17	0.00	0.00			
Sat Flow, veh/h	1701	1786	0	0	1772	1514	1820	0	0			
Grp Volume(v), veh/h	701	527	0	0	426	0	247	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1786	0	0	1772	1514	1820	0	0			
Q Serve(g_s), s	25.2	17.1	0.0	0.0	18.7	0.0	11.8	0.0	0.0			
Cycle Q Clear(g_c), s	25.2	17.1	0.0	0.0	18.7	0.0	11.8	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	757	1292	0	0	606		301	0				
V/C Ratio(X)	0.93	0.41	0.00	0.00	0.70		0.82	0.00				
Avail Cap(c_a), veh/h	807	1292	0	0	606		324	0				
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.23	0.23	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	20.8	10.8	0.0	0.0	25.7	0.0	36.3	0.0	0.0			
Incr Delay (d2), s/veh	4.7	0.2	0.0	0.0	6.7	0.0	14.6	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	13.3	9.2	0.0	0.0	13.3	0.0	10.5	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	25.5	11.0	0.0	0.0	32.4	0.0	50.9	0.0	6.0			
LnGrp LOS	C	B	A	A	C		D	A	A			
Approach Vol, veh/h		1228			426	A		359	A			
Approach Delay, s/veh		19.3			32.4			36.9				
Approach LOS		B			C			D				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		70.1		19.9	34.4	35.8			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		63.0		15.0	31.0	26.0			
Max Q Clear Time (g_c+I1), s		19.1		13.8	27.2	20.7			
Green Ext Time (p_c), s		0.3		0.1	1.1	0.1			

Intersection Summary		
HCM 6th Ctrl Delay	25.2	
HCM 6th LOS	C	

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	9.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	202	29	235	108	33	269
Future Vol, veh/h	202	29	235	108	33	269
Conflicting Peds, #/hr	0	0	0	0	121	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	224	32	261	120	37	299

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	815	442	0	0	502	0
Stage 1	442	-	-	-	-	-
Stage 2	373	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.3	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	386	651	-	-	806	-
Stage 1	654	-	-	-	-	-
Stage 2	796	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	326	585	-	-	725	-
Mov Cap-2 Maneuver	326	-	-	-	-	-
Stage 1	588	-	-	-	-	-
Stage 2	747	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	34	0	1.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	326	585	725	-
HCM Lane V/C Ratio	-	-	0.688	0.055	0.051	-
HCM Control Delay (s)	-	-	37.2	11.5	10.2	0
HCM Lane LOS	-	-	E	B	B	A
HCM 95th %tile Q(veh)	-	-	4.8	0.2	0.2	-

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	38	345	0	84	397
Future Vol, veh/h	16	38	345	0	84	397
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-4	-	-	4
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	18	42	383	0	93	441

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1010	383	0	0	383	0
Stage 1	383	-	-	-	-	-
Stage 2	627	-	-	-	-	-
Critical Hdwy	6.22	6.12	-	-	4.3	-
Critical Hdwy Stg 1	6.2	-	-	-	-	-
Critical Hdwy Stg 2	5.22	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	310	711	-	-	887	-
Stage 1	725	-	-	-	-	-
Stage 2	621	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	267	711	-	-	887	-
Mov Cap-2 Maneuver	267	-	-	-	-	-
Stage 1	725	-	-	-	-	-
Stage 2	535	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.1	0	1.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	267	711	887	-
HCM Lane V/C Ratio	-	-	0.067	0.059	0.105	-
HCM Control Delay (s)	-	-	19.4	10.4	9.5	0
HCM Lane LOS	-	-	C	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.2	0.4	-

Intersection	
Int Delay, s/veh	0.5

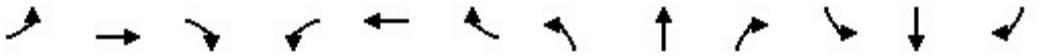
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	39	306	13	0	413
Future Vol, veh/h	0	39	306	13	0	413
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	1	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	2	2	0	3
Mvmt Flow	0	43	340	14	0	459

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	347	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.32	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	731	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	731	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

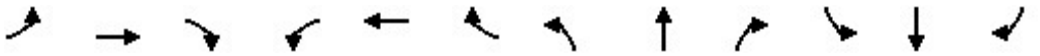
Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	731	-
HCM Lane V/C Ratio	-	-	0.059	-
HCM Control Delay (s)	-	-	10.2	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.2	-

2027 Horizon Year Build Scenario With Adjacent Development PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	399	99	249	261	134	80	81	224	229	139	104
Future Volume (vph)	130	399	99	249	261	134	80	81	224	229	139	104
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		225	200		185	175		0	150		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	50			75			100			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.890			0.936	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	1757	1465	1620	1747	1485	1604	1587	0	1645	1732	0
Flt Permitted	0.521			0.359			0.431			0.221		
Satd. Flow (perm)	925	1757	1465	612	1747	1485	728	1587	0	383	1732	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			105			143		134			38	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			370			459			336	
Travel Time (s)		14.1			6.3			12.5			6.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	3%	0%	1%	1%	0%	0%	2%	0%	0%	0%
Adj. Flow (vph)	138	424	105	265	278	143	85	86	238	244	148	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	138	424	105	265	278	143	85	324	0	244	259	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1		1	1	
Detector Template			Right									
Leading Detector (ft)	34	34	34	34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6	-6	-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6	-6	-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40	40	40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	3	1	6	7	3	8		7	4	
Switch Phase												



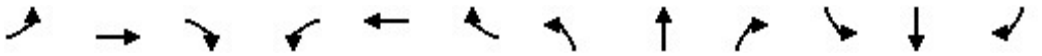
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0	3.0	3.0	10.0	3.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	10.6	39.6	10.5	9.6	16.6	9.5	10.5	9.5		9.5	9.5	
Total Split (s)	12.8	41.2	12.7	12.8	41.2	16.0	12.7	20.0		16.0	23.3	
Total Split (%)	14.2%	45.8%	14.1%	14.2%	45.8%	17.8%	14.1%	22.2%		17.8%	25.9%	
Maximum Green (s)	7.0	34.8	7.0	7.0	34.8	10.3	7.0	14.5		10.3	17.8	
Yellow Time (s)	3.2	4.4	3.2	3.2	4.4	3.2	3.2	3.2		3.2	3.2	
All-Red Time (s)	2.6	2.0	2.5	2.6	2.0	2.5	2.5	2.3		2.5	2.3	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.8	5.4	4.7	4.8	5.4	4.7	4.7	4.5		4.7	4.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0	3.0	3.0	6.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0	0.0	0.0	13.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max	None	None	C-Max	None	None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			22.0			22.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	45.2	36.7	49.9	45.4	36.8	53.5	22.2	14.6		29.2	18.1	
Actuated g/C Ratio	0.50	0.41	0.55	0.50	0.41	0.59	0.25	0.16		0.32	0.20	
v/c Ratio	0.26	0.59	0.12	0.67	0.39	0.15	0.33	0.88		0.87	0.69	
Control Delay	11.5	25.4	2.5	14.4	11.5	1.2	24.6	46.7		54.0	38.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	11.5	25.4	2.5	14.4	11.5	1.2	24.6	46.7		54.0	38.3	
LOS	B	C	A	B	B	A	C	D		D	D	
Approach Delay		18.9			10.5			42.1			45.9	
Approach LOS		B			B			D			D	
Queue Length 50th (ft)	29	150	0	34	61	0	26	85		84	93	
Queue Length 95th (ft)	53	228	18	m46	m79	m5	53	#202		#173	159	
Internal Link Dist (ft)		747			290			379			256	
Turn Bay Length (ft)	175		225	200		185	175			150		
Base Capacity (vph)	532	716	862	398	713	940	259	384		282	391	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.26	0.59	0.12	0.67	0.39	0.15	0.33	0.84		0.87	0.66	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 68 (76%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 26.5		Intersection LOS: C	
Intersection Capacity Utilization 85.3%		ICU Level of Service E	
Analysis Period (min) 15			

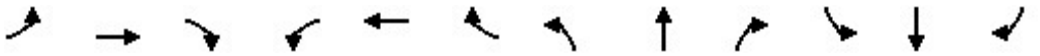
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	677	184	84	491	0	0	0	0	400	0	232
Future Volume (vph)	0	677	184	84	491	0	0	0	0	400	0	232
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	100		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.950	
Flt Protected				0.950							0.969	
Satd. Flow (prot)	0	1782	1515	1637	1765	0	0	0	0	0	1767	0
Flt Permitted				0.091							0.969	
Satd. Flow (perm)	0	1782	1515	157	1765	0	0	0	0	0	1767	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			134								121	
Link Speed (mph)		30			40			30			30	
Link Distance (ft)		199			608			453			537	
Travel Time (s)		4.5			10.4			10.3			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	1%	1%	1%	2%	0%	0%	0%	0%	1%	0%	1%
Adj. Flow (vph)	0	752	204	93	546	0	0	0	0	444	0	258
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	752	204	93	546	0	0	0	0	0	702	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		42.5	42.5	13.5	56.0					34.0	34.0	
Total Split (%)		47.2%	47.2%	15.0%	62.2%					37.8%	37.8%	
Maximum Green (s)		36.0	36.0	7.0	49.5					28.0	28.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		39.7	39.7	50.5	50.5						29.0	
Actuated g/C Ratio		0.44	0.44	0.56	0.56						0.32	
v/c Ratio		0.96	0.27	0.43	0.55						1.08	
Control Delay		43.1	7.1	8.3	6.8						84.7	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		43.1	7.1	8.3	6.8						84.7	
LOS		D	A	A	A						F	
Approach Delay		35.5			7.0						84.7	
Approach LOS		D			A						F	
Queue Length 50th (ft)		~377	15	6	125						~320	
Queue Length 95th (ft)		m#512	m45	m6	m123						#494	
Internal Link Dist (ft)		119			528			373			457	
Turn Bay Length (ft)			125	100								
Base Capacity (vph)		785	742	219	990						651	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.96	0.27	0.42	0.55						1.08	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 32 (36%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.08			
Intersection Signal Delay: 42.6		Intersection LOS: D	
Intersection Capacity Utilization 94.2%		ICU Level of Service F	
Analysis Period (min) 15			

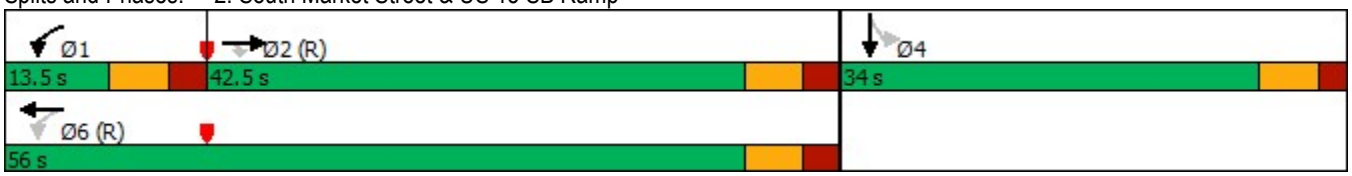
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

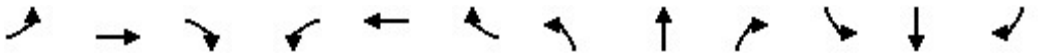
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

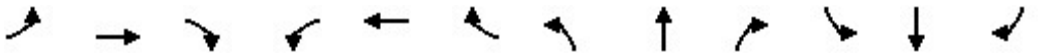
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US 15 SB Ramp





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	619	465	0	0	370	167	214	0	96	0	0	0
Future Volume (vph)	619	465	0	0	370	167	214	0	96	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.958				
Flt Protected	0.950							0.967				
Satd. Flow (prot)	1693	1723	0	0	1765	1464	0	1759	0	0	0	0
Flt Permitted	0.185							0.967				
Satd. Flow (perm)	330	1723	0	0	1765	1464	0	1759	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						194		109				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	0%	0%	2%	1%	1%	0%	3%	0%	0%	0%
Adj. Flow (vph)	720	541	0	0	430	194	249	0	112	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	720	541	0	0	430	194	0	361	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												

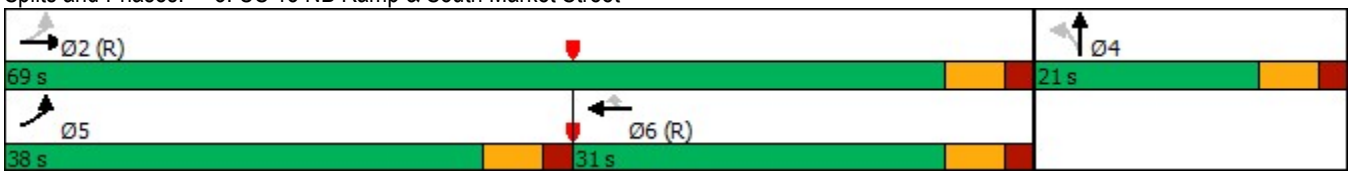


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	38.0	69.0			31.0	31.0	21.0	21.0				
Total Split (%)	42.2%	76.7%			34.4%	34.4%	23.3%	23.3%				
Maximum Green (s)	32.0	63.0			25.0	25.0	15.0	15.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	64.3	64.3			26.3	26.3		15.7				
Actuated g/C Ratio	0.71	0.71			0.29	0.29		0.17				
v/c Ratio	0.98	0.44			0.83	0.34		0.91				
Control Delay	33.2	1.4			46.0	5.7		54.5				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	33.2	1.4			46.0	5.7		54.5				
LOS	C	A			D	A		D				
Approach Delay		19.5			33.5			54.5				
Approach LOS		B			C			D				
Queue Length 50th (ft)	309	19			183	0		115				
Queue Length 95th (ft)	m220	m19			#288	34		#225				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	735	1231			515	565		402				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.98	0.44			0.83	0.34		0.90				

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 29.0		Intersection LOS: C	
Intersection Capacity Utilization 94.2%		ICU Level of Service F	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

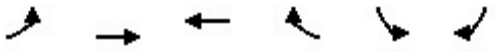
Splits and Phases: 3: US 15 NB Ramp & South Market Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	202	29	238	108	33	270
Future Volume (vph)	202	29	238	108	33	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		0%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.958			
Flt Protected	0.950					0.995
Satd. Flow (prot)	1770	1583	1785	0	0	1828
Flt Permitted	0.950					0.995
Satd. Flow (perm)	1770	1583	1785	0	0	1828
Link Speed (mph)	25		25			35
Link Distance (ft)	189		336			230
Travel Time (s)	5.2		9.2			4.5
Confl. Peds. (#/hr)					121	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	224	32	264	120	37	300
Shared Lane Traffic (%)						
Lane Group Flow (vph)	224	32	384	0	0	337
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.3%		ICU Level of Service B	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	852	644	93	0	0
Future Volume (vph)	0	852	644	93	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	1900	1844	1552	0	0
Flt Permitted						
Satd. Flow (perm)	0	1900	1844	1552	0	0
Link Speed (mph)		30	40		25	
Link Distance (ft)		370	199		166	
Travel Time (s)		8.4	3.4		4.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	2%	0%	0%
Adj. Flow (vph)	0	947	716	103	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	947	716	103	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		



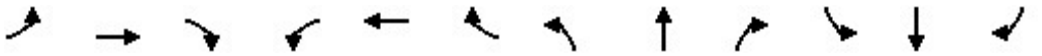
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	16	38	347	0	84	404
Future Volume (vph)	16	38	347	0	84	404
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Grade (%)	-1%		-4%			4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950					0.991
Satd. Flow (prot)	1778	1591	1773	0	0	1675
Flt Permitted	0.950					0.991
Satd. Flow (perm)	1778	1591	1773	0	0	1675
Link Speed (mph)	25		25			25
Link Distance (ft)	306		420			459
Travel Time (s)	8.3		11.5			12.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	18	42	386	0	93	449
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	42	386	0	0	542
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	1.07	1.07	1.12	1.12
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	57.5%	ICU Level of Service	B
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	39	308	13	0	420
Future Volume (vph)	0	39	308	13	0	420
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%		1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865	0.995			
Flt Protected						
Satd. Flow (prot)	0	1603	1844	0	0	1835
Flt Permitted						
Satd. Flow (perm)	0	1603	1844	0	0	1835
Link Speed (mph)	25		25			25
Link Distance (ft)	315		365			420
Travel Time (s)	8.6		10.0			11.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	2%	2%	2%	0%	3%
Adj. Flow (vph)	0	43	342	14	0	467
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	43	356	0	0	467
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	27.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	399	99	249	261	134	80	81	224	229	139	104
Future Volume (veh/h)	130	399	99	249	261	134	80	81	224	229	139	104
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1935	1906	1711	1697	1697	1837	1837	1809	1794	1866	1794
Adj Flow Rate, veh/h	138	424	91	265	278	82	85	86	188	244	148	96
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	1	3	0	1	1	0	0	2	0	0	0
Cap, veh/h	534	770	748	410	700	774	314	88	193	301	246	159
Arrive On Green	0.07	0.40	0.40	0.09	0.41	0.41	0.07	0.17	0.17	0.13	0.23	0.23
Sat Flow, veh/h	1856	1935	1616	1629	1697	1438	1750	513	1122	1709	1057	686
Grp Volume(v), veh/h	138	424	91	265	278	82	85	0	274	244	0	244
Grp Sat Flow(s),veh/h/ln	1856	1935	1616	1629	1697	1438	1750	0	1635	1709	0	1743
Q Serve(g_s), s	3.8	15.2	2.9	8.0	10.4	2.5	3.5	0.0	15.0	10.2	0.0	11.2
Cycle Q Clear(g_c), s	3.8	15.2	2.9	8.0	10.4	2.5	3.5	0.0	15.0	10.2	0.0	11.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.69	1.00		0.39
Lane Grp Cap(c), veh/h	534	770	748	410	700	774	314	0	282	301	0	405
V/C Ratio(X)	0.26	0.55	0.12	0.65	0.40	0.11	0.27	0.00	0.97	0.81	0.00	0.60
Avail Cap(c_a), veh/h	562	770	748	410	700	774	356	0	282	301	0	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.1	20.9	13.8	17.4	18.6	10.2	27.7	0.0	37.0	26.0	0.0	30.8
Incr Delay (d2), s/veh	0.3	2.8	0.3	3.5	1.7	0.3	0.5	0.0	46.0	15.4	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.7	11.3	2.0	6.1	7.4	1.5	2.7	0.0	14.6	9.0	0.0	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.3	23.7	14.1	20.9	20.3	10.5	28.2	0.0	83.1	41.4	0.0	33.3
LnGrp LOS	B	C	B	C	C	B	C	A	F	D	A	C
Approach Vol, veh/h		653			625			359			488	
Approach Delay, s/veh		20.4			19.2			70.1			37.4	
Approach LOS		C			B			E			D	

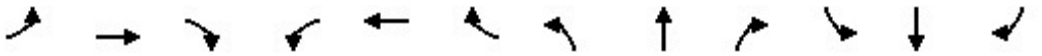
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	41.2	10.6	25.4	11.5	42.5	16.0	20.0
Change Period (Y+Rc), s	* 5.8	6.4	* 5.7	5.5	* 5.8	6.4	* 5.7	5.5
Max Green Setting (Gmax), s	* 7	34.8	* 7	17.8	* 7	34.8	* 10	14.5
Max Q Clear Time (g_c+I1), s	10.0	17.2	5.5	13.2	5.8	12.4	12.2	17.0
Green Ext Time (p_c), s	0.0	4.8	0.0	0.3	0.0	3.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	32.3
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



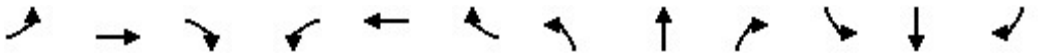
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	677	184	84	491	0	0	0	0	400	0	232
Future Volume (veh/h)	0	677	184	84	491	0	0	0	0	400	0	232
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1786	1786	1772	0				1860	1950	1860
Adj Flow Rate, veh/h	0	752	0	93	546	0				444	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	1	1	1	2	0				1	0	1
Cap, veh/h	0	886		260	1083	0				505	0	
Arrive On Green	0.00	0.50	0.00	0.07	0.81	0.00				0.27	0.00	0.00
Sat Flow, veh/h	0	1786	1514	1701	1772	0				1857	0	0
Grp Volume(v), veh/h	0	752	0	93	546	0				444	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1514	1701	1772	0				1857	0	0
Q Serve(g_s), s	0.0	33.0	0.0	2.2	8.8	0.0				20.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	33.0	0.0	2.2	8.8	0.0				20.6	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	886		260	1083	0				505	0	
V/C Ratio(X)	0.00	0.85		0.36	0.50	0.00				0.88	0.00	
Avail Cap(c_a), veh/h	0	886		319	1083	0				598	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.44	0.44	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	19.7	0.0	16.2	4.1	0.0				31.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	9.9	0.0	0.4	0.7	0.0				12.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	21.4	0.0	1.3	3.8	0.0				16.1	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	29.6	0.0	16.6	4.8	0.0				43.9	0.0	6.0
LnGrp LOS	A	C		B	A	A				D	A	A
Approach Vol, veh/h		752	A		639						596	A
Approach Delay, s/veh		29.6			6.5						34.3	
Approach LOS		C			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.4	50.2		29.5		60.5
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	36.0		28.0		49.5
Max Q Clear Time (g_c+I1), s	4.2	35.0		22.6		10.8
Green Ext Time (p_c), s	0.1	0.1		0.9		0.3

Intersection Summary	
HCM 6th Ctrl Delay	23.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	619	465	0	0	370	167	214	0	96	0	0	0
Future Volume (veh/h)	619	465	0	0	370	167	214	0	96	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1786	0	0	1772	1786	1823	1911	1795			
Adj Flow Rate, veh/h	720	541	0	0	430	0	249	0	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	1	1	0	0	2	1	1	0	3			
Cap, veh/h	768	1291	0	0	552		303	0				
Arrive On Green	0.24	0.48	0.00	0.00	0.31	0.00	0.17	0.00	0.00			
Sat Flow, veh/h	1701	1786	0	0	1772	1514	1820	0	0			
Grp Volume(v), veh/h	720	541	0	0	430	0	249	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1786	0	0	1772	1514	1820	0	0			
Q Serve(g_s), s	28.5	17.6	0.0	0.0	19.9	0.0	11.9	0.0	0.0			
Cycle Q Clear(g_c), s	28.5	17.6	0.0	0.0	19.9	0.0	11.9	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	768	1291	0	0	552		303	0				
V/C Ratio(X)	0.94	0.42	0.00	0.00	0.78		0.82	0.00				
Avail Cap(c_a), veh/h	787	1291	0	0	552		324	0				
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.19	0.19	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	22.9	11.0	0.0	0.0	28.2	0.0	36.2	0.0	0.0			
Incr Delay (d2), s/veh	4.9	0.2	0.0	0.0	10.4	0.0	14.9	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	19.2	9.2	0.0	0.0	14.5	0.0	10.6	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	27.8	11.2	0.0	0.0	38.6	0.0	51.1	0.0	6.0			
LnGrp LOS	C	B	A	A	D		D	A	A			
Approach Vol, veh/h		1261			430	A		361	A			
Approach Delay, s/veh		20.7			38.6			37.1				
Approach LOS		C			D			D				

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		70.0		20.0	37.0	33.0						
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0						
Max Green Setting (Gmax), s		63.0		15.0	32.0	25.0						
Max Q Clear Time (g_c+I1), s		19.6		13.9	30.5	21.9						
Green Ext Time (p_c), s		0.3		0.1	0.5	0.1						

Intersection Summary												
HCM 6th Ctrl Delay			27.3									
HCM 6th LOS			C									

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	9.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	202	29	238	108	33	270
Future Vol, veh/h	202	29	238	108	33	270
Conflicting Peds, #/hr	0	0	0	0	121	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	224	32	264	120	37	300

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	819	445	0	0	505	0
Stage 1	445	-	-	-	-	-
Stage 2	374	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.3	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	384	648	-	-	804	-
Stage 1	651	-	-	-	-	-
Stage 2	795	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	324	583	-	-	723	-
Mov Cap-2 Maneuver	324	-	-	-	-	-
Stage 1	585	-	-	-	-	-
Stage 2	747	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	34.5	0	1.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	324	583	723	-
HCM Lane V/C Ratio	-	-	0.693	0.055	0.051	-
HCM Control Delay (s)	-	-	37.8	11.5	10.2	0
HCM Lane LOS	-	-	E	B	B	A
HCM 95th %tile Q(veh)	-	-	4.9	0.2	0.2	-

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	38	347	0	84	404
Future Vol, veh/h	16	38	347	0	84	404
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-4	-	-	4
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	18	42	386	0	93	449

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1021	386	0	0	386	0
Stage 1	386	-	-	-	-	-
Stage 2	635	-	-	-	-	-
Critical Hdwy	6.22	6.12	-	-	4.3	-
Critical Hdwy Stg 1	6.2	-	-	-	-	-
Critical Hdwy Stg 2	5.22	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	305	708	-	-	885	-
Stage 1	722	-	-	-	-	-
Stage 2	615	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	262	708	-	-	885	-
Mov Cap-2 Maneuver	262	-	-	-	-	-
Stage 1	722	-	-	-	-	-
Stage 2	529	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.2	0	1.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	262	708	885	-
HCM Lane V/C Ratio	-	-	0.068	0.06	0.105	-
HCM Control Delay (s)	-	-	19.7	10.4	9.5	0
HCM Lane LOS	-	-	C	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.2	0.4	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	39	308	13	0	420
Future Vol, veh/h	0	39	308	13	0	420
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	1	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	2	2	0	3
Mvmt Flow	0	43	342	14	0	467

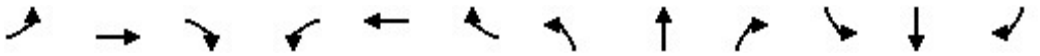
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	349	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.32	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	729	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	729	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	729	-
HCM Lane V/C Ratio	-	-	0.059	-
HCM Control Delay (s)	-	-	10.3	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.2	-

2027 Horizon Year Mitigation Scenario
PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	399	99	249	261	134	80	81	224	229	139	104
Future Volume (vph)	130	399	99	249	261	134	80	81	224	229	139	104
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		225	200		185	175		200	260		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	50			75			100			0		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.970				0.850			0.850		0.936	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	3226	0	1620	1747	1485	1604	1809	1507	1645	1732	0
Flt Permitted	0.589			0.325			0.421			0.605		
Satd. Flow (perm)	1045	3226	0	554	1747	1485	711	1809	1507	1047	1732	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39				143			177		47	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			370			459			336	
Travel Time (s)		14.1			6.3			12.5			6.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	3%	0%	1%	1%	0%	0%	2%	0%	0%	0%
Adj. Flow (vph)	138	424	105	265	278	143	85	86	238	244	148	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	138	529	0	265	278	143	85	86	238	244	259	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template												
Leading Detector (ft)	34	34		34	34	34	39	39	39	34	34	
Trailing Detector (ft)	-6	-6		-6	-6	-6	-6	-6	-6	-6	-6	
Detector 1 Position(ft)	-6	-6		-6	-6	-6	-6	-6	-6	-6	-6	
Detector 1 Size(ft)	40	40		40	40	40	45	45	45	40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6	7	3	8	1	7	4	
Permitted Phases	2			6		6	8		8	4		
Detector Phase	5	2		1	6	7	3	8	1	7	4	
Switch Phase												

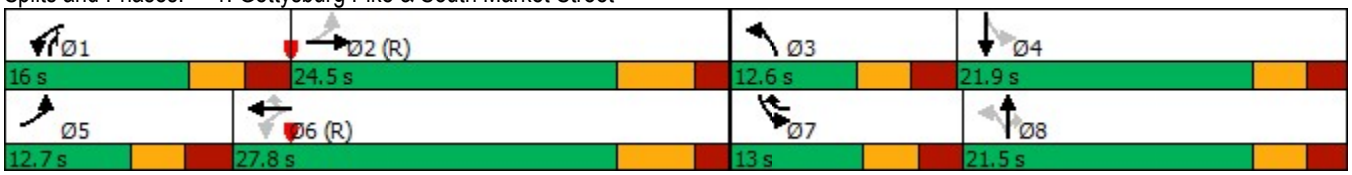


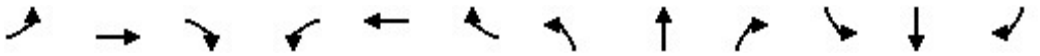
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.8	22.4		9.8	26.5	9.7	9.8	21.5	9.8	9.7	21.5	
Total Split (s)	12.7	24.5		16.0	27.8	13.0	12.6	21.5	16.0	13.0	21.9	
Total Split (%)	16.9%	32.7%		21.3%	37.1%	17.3%	16.8%	28.7%	21.3%	17.3%	29.2%	
Maximum Green (s)	7.0	18.1		10.3	21.4	7.4	7.0	16.1	10.3	7.4	16.5	
Yellow Time (s)	3.1	4.4		3.1	4.4	3.1	3.1	3.1	3.1	3.1	3.1	
All-Red Time (s)	2.6	2.0		2.6	2.0	2.5	2.5	2.3	2.6	2.5	2.3	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.7	5.4		4.7	5.4	4.6	4.6	4.4	4.7	4.6	4.4	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0		3.0	6.0	3.0	3.0	3.0	3.0	3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	25.0		0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	13.0		0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	None	None	None	None	None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			22.0			22.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	33.6	25.1		40.1	30.3	45.2	20.0	13.8	26.6	21.2	14.6	
Actuated g/C Ratio	0.45	0.33		0.53	0.40	0.60	0.27	0.18	0.35	0.28	0.19	
v/c Ratio	0.26	0.48		0.59	0.39	0.15	0.30	0.26	0.37	0.67	0.69	
Control Delay	12.2	22.2		13.2	12.8	0.8	18.3	26.7	6.0	29.1	32.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	12.2	22.2		13.2	12.8	0.8	18.3	26.7	6.0	29.1	32.4	
LOS	B	C		B	B	A	B	C	A	C	C	
Approach Delay		20.1			10.5			12.9			30.8	
Approach LOS		C			B			B			C	
Queue Length 50th (ft)	26	81		28	41	0	20	27	13	65	72	
Queue Length 95th (ft)	53	125		m70	m96	m1	42	55	45	108	128	
Internal Link Dist (ft)		747			290			379			256	
Turn Bay Length (ft)	175			200		185	175		200	260		
Base Capacity (vph)	539	1105		456	706	952	287	412	659	363	440	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.26	0.48		0.58	0.39	0.15	0.30	0.21	0.36	0.67	0.59	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 38 (51%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 18.2		Intersection LOS: B	
Intersection Capacity Utilization 64.4%		ICU Level of Service C	
Analysis Period (min) 15			

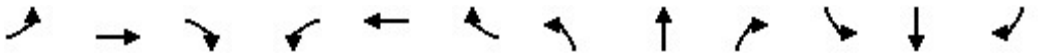
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	677	184	84	491	0	0	0	0	400	0	232
Future Volume (vph)	0	677	184	84	491	0	0	0	0	400	0	232
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	100		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	*0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.950	
Flt Protected				0.950							0.969	
Satd. Flow (prot)	0	3137	1530	1653	1765	0	0	0	0	0	1767	0
Flt Permitted				0.163							0.969	
Satd. Flow (perm)	0	3137	1530	284	1765	0	0	0	0	0	1767	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			204								145	
Link Speed (mph)		30			40			30			30	
Link Distance (ft)		199			608			453			537	
Travel Time (s)		4.5			10.4			10.3			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	0%	0%	0%	1%	0%	1%
Adj. Flow (vph)	0	752	204	93	546	0	0	0	0	444	0	258
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	752	204	93	546	0	0	0	0	0	702	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												

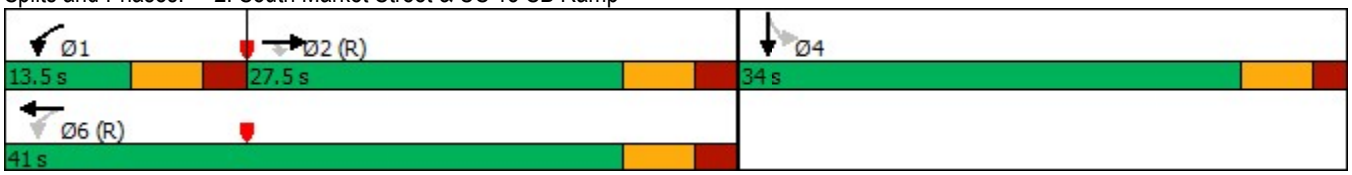


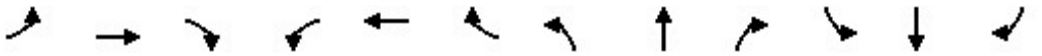
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		27.5	27.5	13.5	41.0					34.0	34.0	
Total Split (%)		36.7%	36.7%	18.0%	54.7%					45.3%	45.3%	
Maximum Green (s)		21.0	21.0	7.0	34.5					28.0	28.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		25.7	25.7	36.5	36.5						28.0	
Actuated g/C Ratio		0.34	0.34	0.49	0.49						0.37	
v/c Ratio		0.70	0.31	0.33	0.64						0.93	
Control Delay		29.1	8.7	5.5	9.5						39.8	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		29.1	8.7	5.5	9.5						39.8	
LOS		C	A	A	A						D	
Approach Delay		24.7			8.9						39.8	
Approach LOS		C			A						D	
Queue Length 50th (ft)		123	3	11	150						198	
Queue Length 95th (ft)		#202	m49	m11	m178						#375	
Internal Link Dist (ft)		119			528			373			457	
Turn Bay Length (ft)			125	100								
Base Capacity (vph)		1074	657	284	858						772	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.70	0.31	0.33	0.64						0.91	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 34 (45%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 24.9		Intersection LOS: C	
Intersection Capacity Utilization 88.0%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

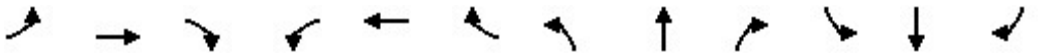
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US 15 SB Ramp





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	619	465	0	0	370	167	214	0	96	0	0	0
Future Volume (vph)	619	465	0	0	370	167	214	0	96	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	0		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	*1.00	*1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.958				
Flt Protected	0.950							0.967				
Satd. Flow (prot)	1693	1723	0	0	1765	1464	0	1759	0	0	0	0
Flt Permitted	0.197							0.967				
Satd. Flow (perm)	351	1723	0	0	1765	1464	0	1759	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						194		131				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	0%	0%	2%	1%	1%	0%	3%	0%	0%	0%
Adj. Flow (vph)	720	541	0	0	430	194	249	0	112	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	720	541	0	0	430	194	0	361	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		23			23			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	31.0	58.0			27.0	27.0	17.0	17.0				
Total Split (%)	41.3%	77.3%			36.0%	36.0%	22.7%	22.7%				
Maximum Green (s)	25.0	52.0			21.0	21.0	11.0	11.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	53.0	53.0			22.0	22.0		12.0				
Actuated g/C Ratio	0.71	0.71			0.29	0.29		0.16				
v/c Ratio	1.01	0.44			0.83	0.34		0.92				
Control Delay	42.3	2.8			41.0	5.3		52.2				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	42.3	2.8			41.0	5.3		52.2				
LOS	D	A			D	A		D				
Approach Delay		25.3			29.9			52.2				
Approach LOS		C			C			D				
Queue Length 50th (ft)	189	17			148	0		86				
Queue Length 95th (ft)	#290	m34			#248	31		#194				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)						260						
Base Capacity (vph)	713	1217			517	566		391				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	1.01	0.44			0.83	0.34		0.92				

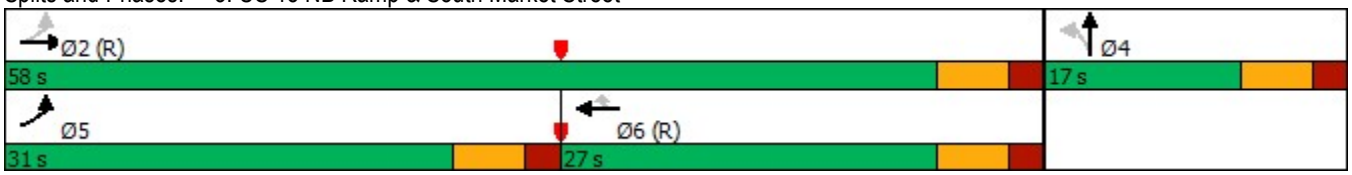
Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay: 30.9		Intersection LOS: C	
Intersection Capacity Utilization 88.0%		ICU Level of Service E	
Analysis Period (min) 15			

* User Entered Value

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

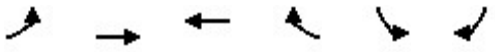
Splits and Phases: 3: US 15 NB Ramp & South Market Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	202	29	238	108	33	270
Future Volume (vph)	202	29	238	108	33	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		0%			1%
Storage Length (ft)	0	0		0	75	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.958			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1785	0	1761	1835
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	1785	0	1761	1835
Link Speed (mph)	25		25			35
Link Distance (ft)	189		336			230
Travel Time (s)	5.2		9.2			4.5
Confl. Peds. (#/hr)					121	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	224	32	264	120	37	300
Shared Lane Traffic (%)						
Lane Group Flow (vph)	224	32	384	0	37	300
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.6%		ICU Level of Service A	
Analysis Period (min) 15			



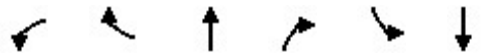
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	852	644	93	0	0
Future Volume (vph)	0	852	644	93	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	4%		0%	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	3610	1844	1552	0	0
Flt Permitted						
Satd. Flow (perm)	0	3610	1844	1552	0	0
Link Speed (mph)		30	40		25	
Link Distance (ft)		370	199		166	
Travel Time (s)		8.4	3.4		4.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	2%	0%	0%
Adj. Flow (vph)	0	947	716	103	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	947	716	103	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.2%		ICU Level of Service A	
Analysis Period (min) 15			



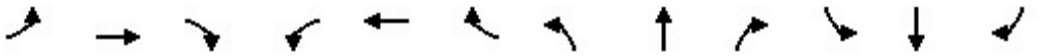
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	16	38	347	0	84	404
Future Volume (vph)	16	38	347	0	84	404
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Grade (%)	-1%		-4%			4%
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1778	1591	1773	0	1619	1687
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1778	1591	1773	0	1619	1687
Link Speed (mph)	25		25			25
Link Distance (ft)	306		420			459
Travel Time (s)	8.3		11.5			12.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	18	42	386	0	93	449
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	42	386	0	93	449
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	1.07	1.07	1.12	1.12
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.3%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	39	308	13	0	420
Future Volume (vph)	0	39	308	13	0	420
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%		1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865	0.995			
Flt Protected						
Satd. Flow (prot)	0	1603	1844	0	0	1835
Flt Permitted						
Satd. Flow (perm)	0	1603	1844	0	0	1835
Link Speed (mph)	25		25			25
Link Distance (ft)	315		365			420
Travel Time (s)	8.6		10.0			11.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	2%	2%	2%	0%	3%
Adj. Flow (vph)	0	43	342	14	0	467
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	43	356	0	0	467
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	27.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	399	99	249	261	134	80	81	224	229	139	104
Future Volume (veh/h)	130	399	99	249	261	134	80	81	224	229	139	104
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1935	1906	1711	1697	1697	1837	1837	1809	1794	1866	1794
Adj Flow Rate, veh/h	138	424	91	265	278	82	85	86	188	244	148	96
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	1	3	0	1	1	0	0	2	0	0	0
Cap, veh/h	554	1053	224	515	685	742	282	271	436	399	201	130
Arrive On Green	0.08	0.35	0.35	0.14	0.40	0.40	0.07	0.15	0.15	0.11	0.19	0.19
Sat Flow, veh/h	1856	3015	642	1629	1697	1438	1750	1837	1533	1709	1057	686
Grp Volume(v), veh/h	138	257	258	265	278	82	85	86	188	244	0	244
Grp Sat Flow(s),veh/h/ln	1856	1838	1819	1629	1697	1438	1750	1837	1533	1709	0	1743
Q Serve(g_s), s	3.4	7.9	8.1	7.2	8.8	2.2	3.0	3.1	7.5	8.4	0.0	9.9
Cycle Q Clear(g_c), s	3.4	7.9	8.1	7.2	8.8	2.2	3.0	3.1	7.5	8.4	0.0	9.9
Prop In Lane	1.00		0.35	1.00		1.00	1.00		1.00	1.00		0.39
Lane Grp Cap(c), veh/h	554	642	635	515	685	742	282	271	436	399	0	332
V/C Ratio(X)	0.25	0.40	0.41	0.51	0.41	0.11	0.30	0.32	0.43	0.61	0.00	0.74
Avail Cap(c_a), veh/h	599	642	635	537	685	742	348	419	559	399	0	407
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.3	18.5	18.5	11.9	15.9	9.3	24.5	28.6	21.9	23.9	0.0	28.6
Incr Delay (d2), s/veh	0.2	1.9	1.9	0.8	1.8	0.3	0.6	0.7	0.7	2.7	0.0	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.3	6.1	6.1	4.2	6.1	1.3	2.3	2.5	4.9	6.8	0.0	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	20.3	20.4	12.7	17.7	9.6	25.1	29.3	22.6	26.6	0.0	34.0
LnGrp LOS	B	C	C	B	B	A	C	C	C	C	A	C
Approach Vol, veh/h		653			625			359			488	
Approach Delay, s/veh		18.9			14.5			24.8			30.3	
Approach LOS		B			B			C			C	

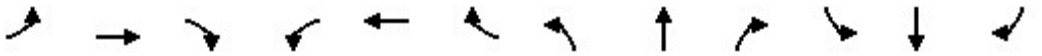
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	31.6	9.8	18.7	10.9	35.7	13.0	15.4
Change Period (Y+Rc), s	5.7	6.4	5.6	* 5.4	5.7	6.4	5.6	* 5.4
Max Green Setting (Gmax), s	10.3	18.1	7.0	* 17	7.0	21.4	7.4	* 16
Max Q Clear Time (g_c+I1), s	9.2	10.1	5.0	11.9	5.4	10.8	10.4	9.5
Green Ext Time (p_c), s	0.1	2.9	0.0	0.3	0.1	2.4	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	21.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



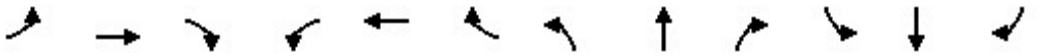
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	677	184	84	491	0	0	0	0	400	0	232
Future Volume (veh/h)	0	677	184	84	491	0	0	0	0	400	0	232
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1772	0				1860	1950	1860
Adj Flow Rate, veh/h	0	752	0	93	546	0				444	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	1	0	0	2	0				1	0	1
Cap, veh/h	0	1399		383	1024	0				523	0	
Arrive On Green	0.00	0.44	0.00	0.06	0.58	0.00				0.28	0.00	0.00
Sat Flow, veh/h	0	3358	1525	1714	1772	0				1857	0	0
Grp Volume(v), veh/h	0	752	0	93	546	0				444	0	0
Grp Sat Flow(s),veh/h/ln	0	1572	1525	1714	1772	0				1857	0	0
Q Serve(g_s), s	0.0	13.1	0.0	2.0	14.1	0.0				16.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	13.1	0.0	2.0	14.1	0.0				16.9	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1399		383	1024	0				523	0	
V/C Ratio(X)	0.00	0.54		0.24	0.53	0.00				0.85	0.00	
Avail Cap(c_a), veh/h	0	1399		464	1024	0				718	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.44	0.44	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	15.2	0.0	10.5	9.7	0.0				25.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.5	0.0	0.1	0.9	0.0				7.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	8.1	0.0	1.2	6.9	0.0				12.7	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	16.7	0.0	10.6	10.5	0.0				32.4	0.0	6.0
LnGrp LOS	A	B		B	B	A				C	A	A
Approach Vol, veh/h		752	A		639						596	A
Approach Delay, s/veh		16.7			10.5						25.7	
Approach LOS		B			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.0	38.9		26.1		48.9
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	21.0		28.0		34.5
Max Q Clear Time (g_c+I1), s	4.0	15.1		18.9		16.1
Green Ext Time (p_c), s	0.1	0.6		1.2		0.3

Intersection Summary	
HCM 6th Ctrl Delay	17.4
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	619	465	0	0	370	167	214	0	96	0	0	0
Future Volume (veh/h)	619	465	0	0	370	167	214	0	96	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1786	0	0	1772	1786	1823	1911	1795			
Adj Flow Rate, veh/h	720	541	0	0	430	0	249	0	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	1	1	0	0	2	1	1	0	3			
Cap, veh/h	747	1262	0	0	520		291	0				
Arrive On Green	0.46	0.94	0.00	0.00	0.29	0.00	0.16	0.00	0.00			
Sat Flow, veh/h	1701	1786	0	0	1772	1514	1820	0	0			
Grp Volume(v), veh/h	720	541	0	0	430	0	249	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1786	0	0	1772	1514	1820	0	0			
Q Serve(g_s), s	23.3	2.3	0.0	0.0	17.0	0.0	10.0	0.0	0.0			
Cycle Q Clear(g_c), s	23.3	2.3	0.0	0.0	17.0	0.0	10.0	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	747	1262	0	0	520		291	0				
V/C Ratio(X)	0.96	0.43	0.00	0.00	0.83		0.86	0.00				
Avail Cap(c_a), veh/h	747	1262	0	0	520		291	0				
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.65	0.65	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	11.3	0.7	0.0	0.0	24.7	0.0	30.7	0.0	0.0			
Incr Delay (d2), s/veh	18.5	0.7	0.0	0.0	14.0	0.0	21.3	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	12.0	1.0	0.0	0.0	13.3	0.0	9.9	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	29.8	1.4	0.0	0.0	38.8	0.0	51.9	0.0	6.0			
LnGrp LOS	C	A	A	A	D		D	A	A			
Approach Vol, veh/h		1261			430	A		361	A			
Approach Delay, s/veh		17.6			38.8			37.7				
Approach LOS		B			D			D				

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		58.0		17.0	31.0	27.0						
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0						
Max Green Setting (Gmax), s		52.0		11.0	25.0	21.0						
Max Q Clear Time (g_c+I1), s		4.3		12.0	25.3	19.0						
Green Ext Time (p_c), s		0.3		0.0	0.0	0.1						

Intersection Summary												
HCM 6th Ctrl Delay			25.6									
HCM 6th LOS			C									

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	9.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	202	29	238	108	33	270
Future Vol, veh/h	202	29	238	108	33	270
Conflicting Peds, #/hr	0	0	0	0	121	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	224	32	264	120	37	300

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	819	445	0	0	505	0
Stage 1	445	-	-	-	-	-
Stage 2	374	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.3	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	384	648	-	-	804	-
Stage 1	651	-	-	-	-	-
Stage 2	795	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	328	583	-	-	723	-
Mov Cap-2 Maneuver	328	-	-	-	-	-
Stage 1	585	-	-	-	-	-
Stage 2	754	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	33.5	0	1.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	328	583	723	-
HCM Lane V/C Ratio	-	-	0.684	0.055	0.051	-
HCM Control Delay (s)	-	-	36.7	11.5	10.2	-
HCM Lane LOS	-	-	E	B	B	-
HCM 95th %tile Q(veh)	-	-	4.8	0.2	0.2	-

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	38	347	0	84	404
Future Vol, veh/h	16	38	347	0	84	404
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-4	-	-	4
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	18	42	386	0	93	449

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1021	386	0	0	386	0
Stage 1	386	-	-	-	-	-
Stage 2	635	-	-	-	-	-
Critical Hdwy	6.22	6.12	-	-	4.3	-
Critical Hdwy Stg 1	6.2	-	-	-	-	-
Critical Hdwy Stg 2	5.22	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	305	708	-	-	885	-
Stage 1	722	-	-	-	-	-
Stage 2	615	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	273	708	-	-	885	-
Mov Cap-2 Maneuver	273	-	-	-	-	-
Stage 1	722	-	-	-	-	-
Stage 2	550	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13	0	1.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	273	708	885	-
HCM Lane V/C Ratio	-	-	0.065	0.06	0.105	-
HCM Control Delay (s)	-	-	19.1	10.4	9.5	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.2	0.4	-

Intersection	
Int Delay, s/veh	0.5

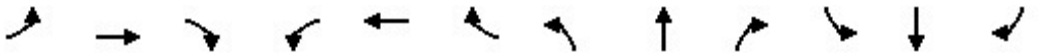
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	39	308	13	0	420
Future Vol, veh/h	0	39	308	13	0	420
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	1	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	2	2	0	3
Mvmt Flow	0	43	342	14	0	467

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	349	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.32	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	729	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	729	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

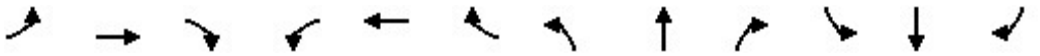
Approach	WB	NB	SB
HCM Control Delay, s	10.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	729	-
HCM Lane V/C Ratio	-	-	0.059	-
HCM Control Delay (s)	-	-	10.3	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.2	-

2020 Baseline Scenario
Saturday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	296	46	80	330	118	56	61	117	114	83	34
Future Volume (vph)	28	296	46	80	330	118	56	61	117	114	83	34
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		0	200		185	175		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	50			75			100			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.980				0.850		0.902			0.956	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	1739	0	1620	1764	1499	1604	1632	0	1645	1769	0
Flt Permitted	0.514			0.407			0.677			0.410		
Satd. Flow (perm)	912	1739	0	694	1764	1499	1143	1632	0	710	1769	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11				202		114			24	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			569			553			571	
Travel Time (s)		14.1			9.7			15.1			11.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	30	315	49	85	351	126	60	65	124	121	88	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	30	364	0	85	351	126	60	189	0	121	124	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	34	34		34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40		40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												

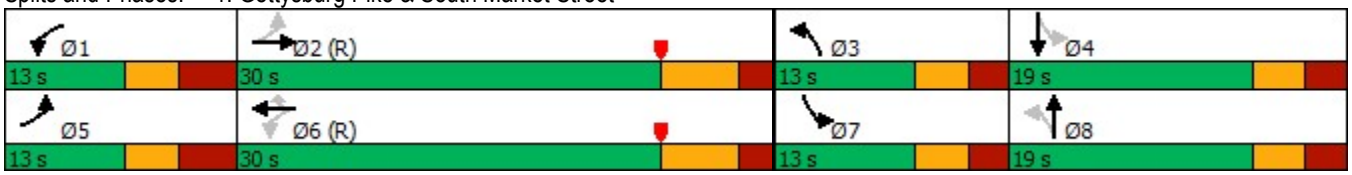


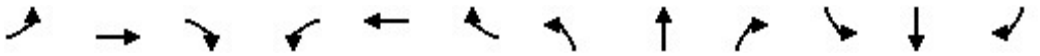
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0		3.0	10.0	10.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	10.6	39.6		9.6	16.6	16.6	10.5	9.5		9.5	9.5	
Total Split (s)	13.0	30.0		13.0	30.0	30.0	13.0	19.0		13.0	19.0	
Total Split (%)	17.3%	40.0%		17.3%	40.0%	40.0%	17.3%	25.3%		17.3%	25.3%	
Maximum Green (s)	6.7	23.6		6.7	23.6	23.6	7.8	13.6		7.8	13.6	
Yellow Time (s)	3.0	4.4		3.0	4.4	4.4	3.0	3.0		3.0	3.0	
All-Red Time (s)	3.3	2.0		3.3	2.0	2.0	2.2	2.4		2.2	2.4	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	5.3	5.4		5.3	5.4	5.4	4.2	4.4		4.2	4.4	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0		3.0	6.0	6.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0		0.0	25.0	25.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0		0.0	13.0	13.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		26.0			26.0	26.0		17.0			17.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	40.0	34.1		42.4	39.2	39.2	17.4	10.4		18.7	13.0	
Actuated g/C Ratio	0.53	0.45		0.57	0.52	0.52	0.23	0.14		0.25	0.17	
v/c Ratio	0.05	0.46		0.18	0.38	0.14	0.19	0.58		0.43	0.38	
Control Delay	9.1	19.6		12.2	18.3	2.6	18.7	20.2		23.5	25.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	9.1	19.6		12.2	18.3	2.6	18.7	20.2		23.5	25.3	
LOS	A	B		B	B	A	B	C		C	C	
Approach Delay		18.8			13.9			19.8			24.4	
Approach LOS		B			B			B			C	
Queue Length 50th (ft)	5	99		14	59	0	16	26		33	34	
Queue Length 95th (ft)	15	180		m32	196	m12	33	69		59	69	
Internal Link Dist (ft)		747			489			473			491	
Turn Bay Length (ft)	175			200		185	175			150		
Base Capacity (vph)	569	795		487	922	880	328	409		288	391	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.05	0.46		0.17	0.38	0.14	0.18	0.46		0.42	0.32	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 70 (93%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 18.0		Intersection LOS: B	
Intersection Capacity Utilization 57.8%		ICU Level of Service B	
Analysis Period (min) 15			

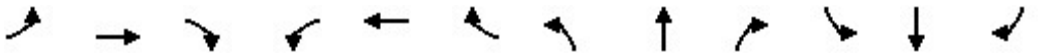
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	454	46	66	480	0	0	0	0	174	2	70
Future Volume (vph)	0	454	46	66	480	0	0	0	0	174	2	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	90		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.961	
Flt Protected				0.950							0.966	
Satd. Flow (prot)	0	1782	1530	1653	1800	0	0	0	0	0	1783	0
Flt Permitted				0.322							0.966	
Satd. Flow (perm)	0	1782	1530	560	1800	0	0	0	0	0	1783	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			138								25	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		569			608			453			537	
Travel Time (s)		9.7			10.4			10.3			12.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	1%	0%	1%
Adj. Flow (vph)	0	499	51	73	527	0	0	0	0	191	2	77
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	499	51	73	527	0	0	0	0	0	270	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												

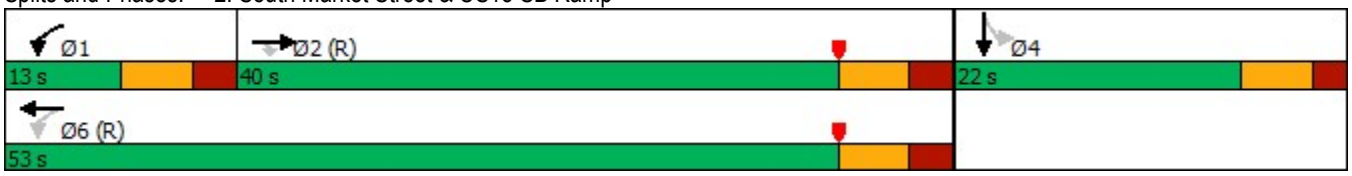


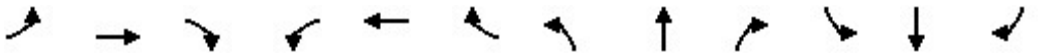
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		40.0	40.0	13.0	53.0					22.0	22.0	
Total Split (%)		53.3%	53.3%	17.3%	70.7%					29.3%	29.3%	
Maximum Green (s)		33.5	33.5	6.5	46.5					16.0	16.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		39.1	39.1	49.4	49.4						15.1	
Actuated g/C Ratio		0.52	0.52	0.66	0.66						0.20	
v/c Ratio		0.54	0.06	0.15	0.44						0.71	
Control Delay		13.2	0.4	6.0	6.9						36.1	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		13.2	0.4	6.0	6.9						36.1	
LOS		B	A	A	A						D	
Approach Delay		12.0			6.8						36.1	
Approach LOS		B			A						D	
Queue Length 50th (ft)		89	0	7	88						83	
Queue Length 95th (ft)		137	m1	17	135						144	
Internal Link Dist (ft)		489			528			373			457	
Turn Bay Length (ft)			125	90								
Base Capacity (vph)		928	863	477	1186						423	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.54	0.06	0.15	0.44						0.64	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 14.4		Intersection LOS: B	
Intersection Capacity Utilization 57.2%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US15 SB Ramp



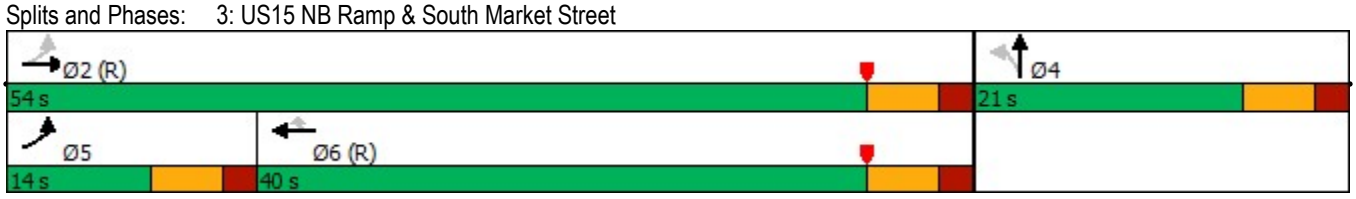


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	124	506	0	0	407	208	137	1	42	0	0	0
Future Volume (vph)	124	506	0	0	407	208	137	1	42	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.968				
Flt Protected	0.950							0.963				
Satd. Flow (prot)	1676	1740	0	0	1800	1479	0	1799	0	0	0	0
Flt Permitted	0.384							0.963				
Satd. Flow (perm)	678	1740	0	0	1800	1479	0	1799	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						221		19				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	132	538	0	0	433	221	146	1	45	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	132	538	0	0	433	221	0	192	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	14.0	54.0			40.0	40.0	21.0	21.0				
Total Split (%)	18.7%	72.0%			53.3%	53.3%	28.0%	28.0%				
Maximum Green (s)	8.0	48.0			34.0	34.0	15.0	15.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	51.9	51.9			40.9	40.9		13.1				
Actuated g/C Ratio	0.69	0.69			0.55	0.55		0.17				
v/c Ratio	0.23	0.45			0.44	0.24		0.58				
Control Delay	2.0	6.2			13.9	2.6		32.3				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	2.0	6.2			13.9	2.6		32.3				
LOS	A	A			B	A		C				
Approach Delay		5.4			10.1			32.3				
Approach LOS		A			B			C				
Queue Length 50th (ft)	2	77			100	0		59				
Queue Length 95th (ft)	8	117			171	27		105				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	588	1203			982	907		398				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.22	0.45			0.44	0.24		0.48				

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 7 (9%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 10.8		Intersection LOS: B	
Intersection Capacity Utilization 57.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: US15 NB Ramp & South Market Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	296	46	80	330	118	56	61	117	114	83	34
Future Volume (veh/h)	28	296	46	80	330	118	56	61	117	114	83	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1949	1949	1711	1711	1711	1837	1837	1837	1794	1866	1794
Adj Flow Rate, veh/h	30	315	35	85	351	65	60	65	74	121	88	21
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	658	811	90	540	849	720	332	95	109	308	234	56
Arrive On Green	0.03	0.47	0.47	0.11	0.99	0.99	0.05	0.12	0.12	0.09	0.16	0.16
Sat Flow, veh/h	1856	1723	191	1629	1711	1450	1750	784	893	1709	1456	347
Grp Volume(v), veh/h	30	0	350	85	351	65	60	0	139	121	0	109
Grp Sat Flow(s),veh/h/ln	1856	0	1915	1629	1711	1450	1750	0	1677	1709	0	1804
Q Serve(g_s), s	0.6	0.0	8.9	1.9	0.2	0.0	2.2	0.0	6.0	4.4	0.0	4.0
Cycle Q Clear(g_c), s	0.6	0.0	8.9	1.9	0.2	0.0	2.2	0.0	6.0	4.4	0.0	4.0
Prop In Lane	1.00		0.10	1.00		1.00	1.00		0.53	1.00		0.19
Lane Grp Cap(c), veh/h	658	0	902	540	849	720	332	0	204	308	0	290
V/C Ratio(X)	0.05	0.00	0.39	0.16	0.41	0.09	0.18	0.00	0.68	0.39	0.00	0.38
Avail Cap(c_a), veh/h	789	0	902	614	849	720	444	0	326	350	0	351
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.90	0.90	0.90	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.4	0.0	12.8	8.8	0.1	0.1	26.4	0.0	31.5	24.6	0.0	28.1
Incr Delay (d2), s/veh	0.0	0.0	1.3	0.1	1.3	0.2	0.3	0.0	4.0	0.8	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.0	6.5	1.0	0.6	0.1	1.7	0.0	4.7	3.2	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.4	0.0	14.1	8.9	1.5	0.4	26.7	0.0	35.5	25.4	0.0	28.9
LnGrp LOS	A	A	B	A	A	A	C	A	D	C	A	C
Approach Vol, veh/h		380			501			199			230	
Approach Delay, s/veh		13.7			2.6			32.8			27.1	
Approach LOS		B			A			C			C	

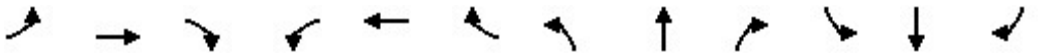
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	40.7	8.2	16.5	7.7	42.6	11.2	13.5
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 6.7	23.6	* 7.8	13.6	* 6.7	23.6	* 7.8	13.6
Max Q Clear Time (g_c+I1), s	3.9	10.9	4.2	6.0	2.6	2.2	6.4	8.0
Green Ext Time (p_c), s	0.0	2.6	0.0	0.1	0.0	4.1	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	14.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



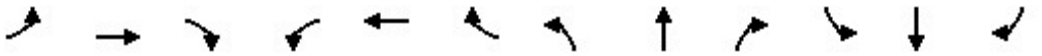
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	454	46	66	480	0	0	0	0	174	2	70
Future Volume (veh/h)	0	454	46	66	480	0	0	0	0	174	2	70
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1800	0				1860	1950	1860
Adj Flow Rate, veh/h	0	499	0	73	527	0				191	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	1	0	0	0	0				1	0	1
Cap, veh/h	0	1054		584	1293	0				260	3	
Arrive On Green	0.00	0.59	0.00	0.11	1.00	0.00				0.14	0.14	0.00
Sat Flow, veh/h	0	1786	1525	1714	1800	0				1838	19	0
Grp Volume(v), veh/h	0	499	0	73	527	0				193	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1800	0				1858	0	0
Q Serve(g_s), s	0.0	11.9	0.0	1.1	0.0	0.0				7.5	0.0	0.0
Cycle Q Clear(g_c), s	0.0	11.9	0.0	1.1	0.0	0.0				7.5	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h	0	1054		584	1293	0				263	0	
V/C Ratio(X)	0.00	0.47		0.12	0.41	0.00				0.73	0.00	
Avail Cap(c_a), veh/h	0	1054		661	1293	0				421	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.89	0.00	0.90	0.90	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.7	0.0	5.3	0.0	0.0				30.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.4	0.0	0.1	0.9	0.0				4.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	7.1	0.0	0.5	0.6	0.0				6.3	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	10.1	0.0	5.4	0.9	0.0				34.8	0.0	6.0
LnGrp LOS	A	B		A	A	A				C	A	A
Approach Vol, veh/h		499	A		600						270	A
Approach Delay, s/veh		10.1			1.4						26.6	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.6	49.8		15.6		59.4
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	6.5	33.5		16.0		46.5
Max Q Clear Time (g_c+I1), s	3.1	13.9		9.5		2.0
Green Ext Time (p_c), s	0.0	0.3		0.3		0.3

Intersection Summary	
HCM 6th Ctrl Delay	9.5
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	506	0	0	407	208	137	1	42	0	0	0
Future Volume (veh/h)	124	506	0	0	407	208	137	1	42	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1772	1800	0	0	1800	1800	1837	1911	1837			
Adj Flow Rate, veh/h	132	538	0	0	433	0	146	1	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	2	0	0	0	0	0	0	0	0			
Cap, veh/h	681	1352	0	0	1118		209	1				
Arrive On Green	0.13	1.00	0.00	0.00	0.62	0.00	0.12	0.12	0.00			
Sat Flow, veh/h	1688	1800	0	0	1800	1525	1808	12	0			
Grp Volume(v), veh/h	132	538	0	0	433	0	147	0	0			
Grp Sat Flow(s),veh/h/ln	1688	1800	0	0	1800	1525	1820	0	0			
Q Serve(g_s), s	1.9	0.0	0.0	0.0	9.0	0.0	5.8	0.0	0.0			
Cycle Q Clear(g_c), s	1.9	0.0	0.0	0.0	9.0	0.0	5.8	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		0.00			
Lane Grp Cap(c), veh/h	681	1352	0	0	1118		211	0				
V/C Ratio(X)	0.19	0.40	0.00	0.00	0.39		0.70	0.00				
Avail Cap(c_a), veh/h	777	1352	0	0	1118		388	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.83	0.83	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	4.0	0.0	0.0	0.0	7.1	0.0	31.9	0.0	0.0			
Incr Delay (d2), s/veh	0.1	0.7	0.0	0.0	1.0	0.0	4.1	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	0.7	0.5	0.0	0.0	5.2	0.0	4.9	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	4.2	0.7	0.0	0.0	8.1	0.0	36.0	0.0	6.0			
LnGrp LOS	A	A	A	A	A		D	A	A			
Approach Vol, veh/h		670			433	A		192	A			
Approach Delay, s/veh		1.4			8.1			29.0				
Approach LOS		A			A			C				

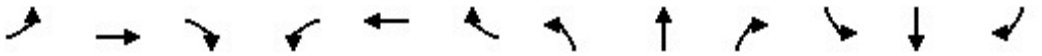
Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		61.3		13.7	9.7	51.6			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		48.0		15.0	8.0	34.0			
Max Q Clear Time (g_c+I1), s		2.0		7.8	3.9	11.0			
Green Ext Time (p_c), s		0.3		0.2	0.1	0.2			

Intersection Summary		
HCM 6th Ctrl Delay	7.7	
HCM 6th LOS	A	

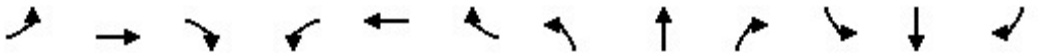
Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

2022 Opening Year No Build Scenario
Saturday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	300	47	81	335	120	57	62	119	116	84	35
Future Volume (vph)	28	300	47	81	335	120	57	62	119	116	84	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		0	200		185	175		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	50			75			100			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.980				0.850		0.901			0.956	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	1739	0	1620	1764	1499	1604	1630	0	1645	1769	0
Flt Permitted	0.527			0.422			0.676			0.388		
Satd. Flow (perm)	935	1739	0	720	1764	1499	1141	1630	0	672	1769	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13				202		103			22	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			569			553			571	
Travel Time (s)		14.1			9.7			15.1			11.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	30	319	50	86	356	128	61	66	127	123	89	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	30	369	0	86	356	128	61	193	0	123	126	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	34	34		34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40		40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												

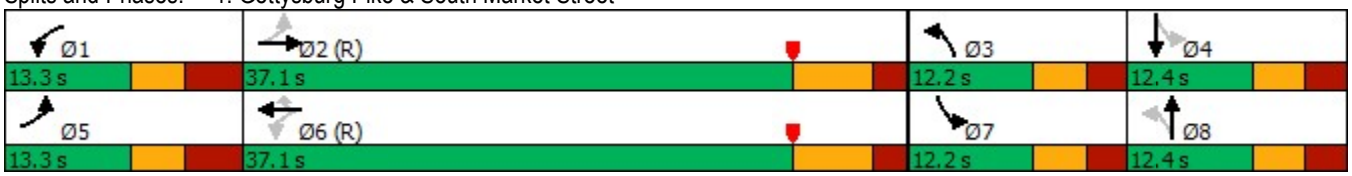


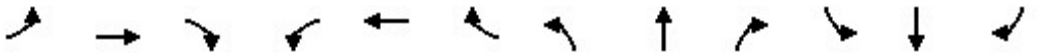
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0		3.0	10.0	10.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	10.6	39.6		9.6	16.6	16.6	10.5	9.5		9.5	9.5	
Total Split (s)	13.3	37.1		13.3	37.1	37.1	12.2	12.4		12.2	12.4	
Total Split (%)	17.7%	49.5%		17.7%	49.5%	49.5%	16.3%	16.5%		16.3%	16.5%	
Maximum Green (s)	7.0	30.7		7.0	30.7	30.7	7.0	7.0		7.0	7.0	
Yellow Time (s)	3.0	4.4		3.0	4.4	4.4	3.0	3.0		3.0	3.0	
All-Red Time (s)	3.3	2.0		3.3	2.0	2.0	2.2	2.4		2.2	2.4	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	5.3	5.4		5.3	5.4	5.4	4.2	4.4		4.2	4.4	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0		3.0	6.0	6.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0		0.0	25.0	25.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0		0.0	13.0	13.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		26.0			26.0	26.0		17.0			17.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	43.0	37.1		45.7	42.4	42.4	14.4	7.8		15.3	10.3	
Actuated g/C Ratio	0.57	0.49		0.61	0.57	0.57	0.19	0.10		0.20	0.14	
v/c Ratio	0.05	0.43		0.16	0.36	0.14	0.23	0.74		0.51	0.48	
Control Delay	6.5	16.0		5.4	10.1	2.7	23.3	34.7		30.4	32.9	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	6.5	16.0		5.4	10.1	2.7	23.3	34.7		30.4	32.9	
LOS	A	B		A	B	A	C	C		C	C	
Approach Delay		15.3			7.7			31.9			31.7	
Approach LOS		B			A			C			C	
Queue Length 50th (ft)	4	93		15	69	4	17	32		36	37	
Queue Length 95th (ft)	12	153		m21	101	m13	40	#107		70	#91	
Internal Link Dist (ft)		747			489			473			491	
Turn Bay Length (ft)	175			200		185	175			150		
Base Capacity (vph)	623	865		534	996	935	270	265		241	265	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.05	0.43		0.16	0.36	0.14	0.23	0.73		0.51	0.48	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 55 (73%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 18.0		Intersection LOS: B	
Intersection Capacity Utilization 58.4%		ICU Level of Service B	
Analysis Period (min) 15			

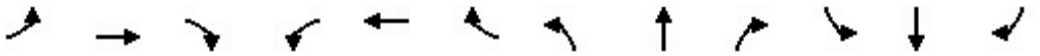
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	461	47	67	487	0	0	0	0	177	2	71
Future Volume (vph)	0	461	47	67	487	0	0	0	0	177	2	71
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	100		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.962	
Flt Protected				0.950							0.966	
Satd. Flow (prot)	0	1782	1530	1653	1800	0	0	0	0	0	1784	0
Flt Permitted				0.310							0.966	
Satd. Flow (perm)	0	1782	1530	539	1800	0	0	0	0	0	1784	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			138								25	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		569			608			453			537	
Travel Time (s)		9.7			10.4			10.3			12.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	1%	0%	1%
Adj. Flow (vph)	0	507	52	74	535	0	0	0	0	195	2	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	507	52	74	535	0	0	0	0	0	275	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												

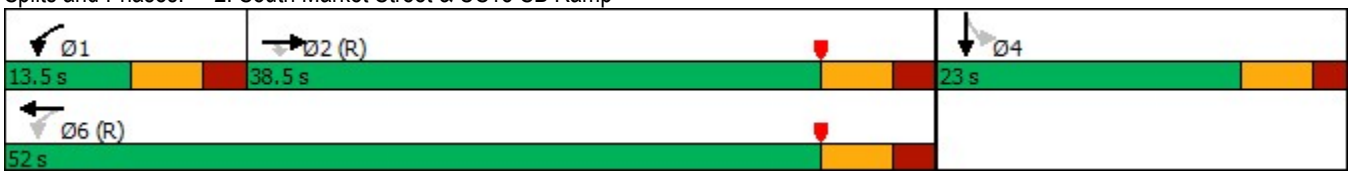


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		38.5	38.5	13.5	52.0					23.0	23.0	
Total Split (%)		51.3%	51.3%	18.0%	69.3%					30.7%	30.7%	
Maximum Green (s)		32.0	32.0	7.0	45.5					17.0	17.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		38.3	38.3	48.9	48.9						15.6	
Actuated g/C Ratio		0.51	0.51	0.65	0.65						0.21	
v/c Ratio		0.56	0.06	0.16	0.46						0.70	
Control Delay		15.3	0.6	7.1	7.4						34.9	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		15.3	0.6	7.1	7.4						34.9	
LOS		B	A	A	A						C	
Approach Delay		13.9			7.4						34.9	
Approach LOS		B			A						C	
Queue Length 50th (ft)		141	0	8	58						85	
Queue Length 95th (ft)		244	m1	23	154						144	
Internal Link Dist (ft)		489			528			373			457	
Turn Bay Length (ft)			125	100								
Base Capacity (vph)		910	848	470	1173						447	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.56	0.06	0.16	0.46						0.62	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 15.2		Intersection LOS: B	
Intersection Capacity Utilization 57.9%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US15 SB Ramp



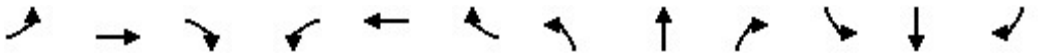
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	514	0	0	413	211	139	1	43	0	0	0
Future Volume (vph)	126	514	0	0	413	211	139	1	43	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.968				
Flt Protected	0.950							0.963				
Satd. Flow (prot)	1676	1740	0	0	1800	1479	0	1799	0	0	0	0
Flt Permitted	0.382							0.963				
Satd. Flow (perm)	674	1740	0	0	1800	1479	0	1799	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						224		19				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	134	547	0	0	439	224	148	1	46	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	134	547	0	0	439	224	0	195	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	13.0	54.0			41.0	41.0	21.0	21.0				
Total Split (%)	17.3%	72.0%			54.7%	54.7%	28.0%	28.0%				
Maximum Green (s)	7.0	48.0			35.0	35.0	15.0	15.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	51.8	51.8			41.4	41.4		13.2				
Actuated g/C Ratio	0.69	0.69			0.55	0.55		0.18				
v/c Ratio	0.24	0.46			0.44	0.24		0.59				
Control Delay	1.0	6.4			13.5	2.5		32.5				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	1.0	6.4			13.5	2.5		32.5				
LOS	A	A			B	A		C				
Approach Delay		5.3			9.8			32.5				
Approach LOS		A			A			C				
Queue Length 50th (ft)	0	74			99	0		60				
Queue Length 95th (ft)	1	103			169	27		107				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	572	1201			993	916		398				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.23	0.46			0.44	0.24		0.49				

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 10 (13%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 10.7		Intersection LOS: B	
Intersection Capacity Utilization 57.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: US15 NB Ramp & South Market Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	300	47	81	335	120	57	62	119	116	84	35
Future Volume (veh/h)	28	300	47	81	335	120	57	62	119	116	84	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1949	1949	1711	1711	1711	1837	1837	1837	1794	1866	1794
Adj Flow Rate, veh/h	30	319	36	86	356	67	61	66	77	123	89	22
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	669	833	94	553	872	739	312	82	96	287	212	52
Arrive On Green	0.03	0.48	0.48	0.11	1.00	1.00	0.05	0.11	0.11	0.09	0.15	0.15
Sat Flow, veh/h	1856	1720	194	1629	1711	1450	1750	773	902	1709	1445	357
Grp Volume(v), veh/h	30	0	355	86	356	67	61	0	143	123	0	111
Grp Sat Flow(s),veh/h/ln	1856	0	1914	1629	1711	1450	1750	0	1675	1709	0	1802
Q Serve(g_s), s	0.6	0.0	8.8	1.9	0.0	0.0	2.3	0.0	6.3	4.6	0.0	4.2
Cycle Q Clear(g_c), s	0.6	0.0	8.8	1.9	0.0	0.0	2.3	0.0	6.3	4.6	0.0	4.2
Prop In Lane	1.00		0.10	1.00		1.00	1.00		0.54	1.00		0.20
Lane Grp Cap(c), veh/h	669	0	927	553	872	739	312	0	179	287	0	264
V/C Ratio(X)	0.04	0.00	0.38	0.16	0.41	0.09	0.20	0.00	0.80	0.43	0.00	0.42
Avail Cap(c_a), veh/h	808	0	927	633	872	739	403	0	179	308	0	264
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.89	0.89	0.89	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.9	0.0	12.2	8.3	0.0	0.0	27.3	0.0	32.7	25.5	0.0	29.1
Incr Delay (d2), s/veh	0.0	0.0	1.2	0.1	1.3	0.2	0.3	0.0	22.2	1.0	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.0	6.3	1.0	0.6	0.1	1.7	0.0	6.5	3.3	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.9	0.0	13.4	8.5	1.3	0.2	27.6	0.0	55.0	26.5	0.0	30.2
LnGrp LOS	A	A	B	A	A	A	C	A	D	C	A	C
Approach Vol, veh/h		385			509			204			234	
Approach Delay, s/veh		13.1			2.3			46.8			28.2	
Approach LOS		B			A			D			C	

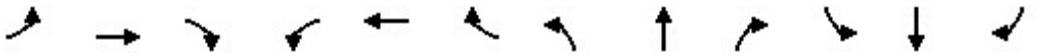
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	41.7	8.3	15.4	7.7	43.6	11.3	12.4
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 7	30.7	* 7	7.0	* 7	30.7	* 7	7.0
Max Q Clear Time (g_c+I1), s	3.9	10.8	4.3	6.2	2.6	2.0	6.6	8.3
Green Ext Time (p_c), s	0.0	3.4	0.0	0.0	0.0	4.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



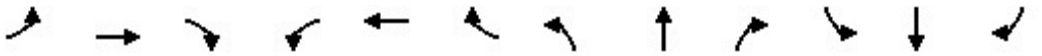
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	461	47	67	487	0	0	0	0	177	2	71
Future Volume (veh/h)	0	461	47	67	487	0	0	0	0	177	2	71
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1800	0				1860	1950	1860
Adj Flow Rate, veh/h	0	507	0	74	535	0				195	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	1	0	0	0	0				1	0	1
Cap, veh/h	0	1049		575	1288	0				265	3	
Arrive On Green	0.00	0.59	0.00	0.11	1.00	0.00				0.14	0.14	0.00
Sat Flow, veh/h	0	1786	1525	1714	1800	0				1839	19	0
Grp Volume(v), veh/h	0	507	0	74	535	0				197	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1800	0				1858	0	0
Q Serve(g_s), s	0.0	12.3	0.0	1.1	0.0	0.0				7.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	12.3	0.0	1.1	0.0	0.0				7.6	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h	0	1049		575	1288	0				268	0	
V/C Ratio(X)	0.00	0.48		0.13	0.42	0.00				0.74	0.00	
Avail Cap(c_a), veh/h	0	1049		663	1288	0				446	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.89	0.00	0.90	0.90	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.9	0.0	5.4	0.0	0.0				30.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.4	0.0	0.1	0.9	0.0				3.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	7.3	0.0	0.5	0.6	0.0				6.4	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	10.3	0.0	5.5	0.9	0.0				34.6	0.0	6.0
LnGrp LOS	A	B		A	A	A				C	A	A
Approach Vol, veh/h		507	A		609						275	A
Approach Delay, s/veh		10.3			1.5						26.5	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.6	49.5		15.8		59.2
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	32.0		17.0		45.5
Max Q Clear Time (g_c+I1), s	3.1	14.3		9.6		2.0
Green Ext Time (p_c), s	0.0	0.3		0.4		0.3

Intersection Summary	
HCM 6th Ctrl Delay	9.6
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	514	0	0	413	211	139	1	43	0	0	0
Future Volume (veh/h)	126	514	0	0	413	211	139	1	43	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1772	1800	0	0	1800	1800	1837	1911	1837			
Adj Flow Rate, veh/h	134	547	0	0	439	0	148	1	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	2	0	0	0	0	0	0	0	0			
Cap, veh/h	675	1349	0	0	1115		211	1				
Arrive On Green	0.13	1.00	0.00	0.00	0.62	0.00	0.12	0.12	0.00			
Sat Flow, veh/h	1688	1800	0	0	1800	1525	1808	12	0			
Grp Volume(v), veh/h	134	547	0	0	439	0	149	0	0			
Grp Sat Flow(s),veh/h/ln	1688	1800	0	0	1800	1525	1820	0	0			
Q Serve(g_s), s	1.9	0.0	0.0	0.0	9.2	0.0	5.9	0.0	0.0			
Cycle Q Clear(g_c), s	1.9	0.0	0.0	0.0	9.2	0.0	5.9	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		0.00			
Lane Grp Cap(c), veh/h	675	1349	0	0	1115		213	0				
V/C Ratio(X)	0.20	0.41	0.00	0.00	0.39		0.70	0.00				
Avail Cap(c_a), veh/h	748	1349	0	0	1115		388	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.81	0.81	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	4.1	0.0	0.0	0.0	7.2	0.0	31.8	0.0	0.0			
Incr Delay (d2), s/veh	0.1	0.7	0.0	0.0	1.0	0.0	4.1	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	0.7	0.5	0.0	0.0	5.4	0.0	5.0	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	4.2	0.7	0.0	0.0	8.2	0.0	36.0	0.0	6.0			
LnGrp LOS	A	A	A	A	A		D	A	A			
Approach Vol, veh/h		681			439	A		195	A			
Approach Delay, s/veh		1.4			8.2			28.9				
Approach LOS		A			A			C				

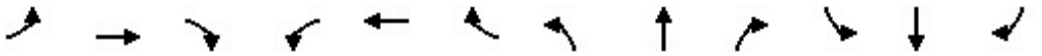
Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		61.2		13.8	9.8	51.5			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		48.0		15.0	7.0	35.0			
Max Q Clear Time (g_c+I1), s		2.0		7.9	3.9	11.2			
Green Ext Time (p_c), s		0.3		0.2	0.1	0.2			

Intersection Summary	
HCM 6th Ctrl Delay	7.8
HCM 6th LOS	A

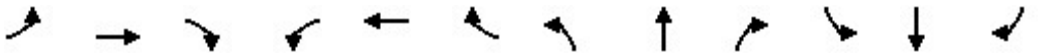
Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

2022 Opening Year No Build Scenario With Adjacent Development Saturday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	300	47	81	335	120	57	62	119	116	84	35
Future Volume (vph)	28	300	47	81	335	120	57	62	119	116	84	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		225	200		185	175		0	150		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	50			75			100			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.901			0.956	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	1775	1509	1620	1764	1499	1604	1630	0	1645	1769	0
Flt Permitted	0.520			0.460			0.676			0.385		
Satd. Flow (perm)	923	1775	1509	784	1764	1499	1141	1630	0	667	1769	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			121			128		103			22	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			569			553			571	
Travel Time (s)		14.1			9.7			15.1			11.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	30	319	50	86	356	128	61	66	127	123	89	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	30	319	50	86	356	128	61	193	0	123	126	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	34	34	20	34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6	0	-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6	0	-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40	20	40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	3	1	6	7	3	8		7	4	
Switch Phase												

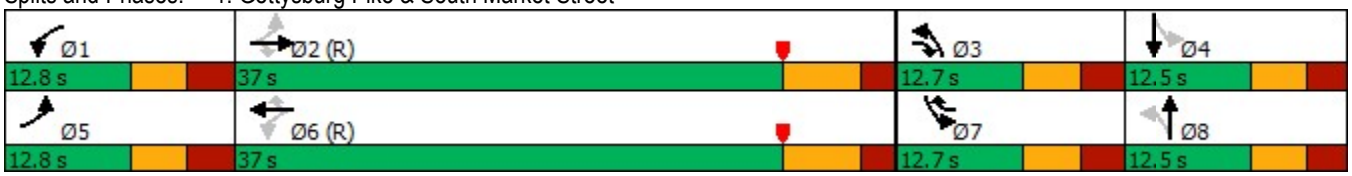


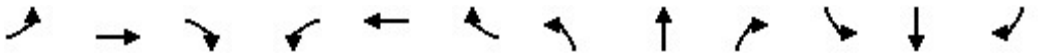
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0	3.0	3.0	10.0	3.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	12.8	39.6	12.7	12.8	16.6	12.7	12.7	12.5		12.7	12.5	
Total Split (s)	12.8	37.0	12.7	12.8	37.0	12.7	12.7	12.5		12.7	12.5	
Total Split (%)	17.1%	49.3%	16.9%	17.1%	49.3%	16.9%	16.9%	16.7%		16.9%	16.7%	
Maximum Green (s)	7.0	30.6	7.0	7.0	30.6	7.0	7.0	7.0		7.0	7.0	
Yellow Time (s)	3.2	4.4	3.2	3.2	4.4	3.2	3.2	3.2		3.2	3.2	
All-Red Time (s)	2.6	2.0	2.5	2.6	2.0	2.5	2.5	2.3		2.5	2.3	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.8	5.4	4.7	4.8	5.4	4.7	4.7	4.5		4.7	4.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0	3.0	3.0	6.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0	0.0	0.0	13.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max	None	None	C-Max	None	None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			22.0			22.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	41.0	34.5	47.6	43.4	39.6	52.9	15.3	7.8		16.6	10.4	
Actuated g/C Ratio	0.55	0.46	0.63	0.58	0.53	0.71	0.20	0.10		0.22	0.14	
v/c Ratio	0.05	0.39	0.05	0.16	0.38	0.12	0.22	0.74		0.49	0.48	
Control Delay	6.6	16.4	0.1	5.7	11.8	4.7	23.0	34.7		29.1	33.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	6.6	16.4	0.1	5.7	11.8	4.7	23.0	34.7		29.1	33.7	
LOS	A	B	A	A	B	A	C	C		C	C	
Approach Delay		13.6			9.3			31.9			31.4	
Approach LOS		B			A			C			C	
Queue Length 50th (ft)	4	81	0	15	71	7	17	32		36	37	
Queue Length 95th (ft)	12	133	0	m24	130	m26	40	#107		70	#91	
Internal Link Dist (ft)		747			489			473			491	
Turn Bay Length (ft)	175		225	200		185	175			150		
Base Capacity (vph)	592	816	1007	543	931	1097	287	265		251	263	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.05	0.39	0.05	0.16	0.38	0.12	0.21	0.73		0.49	0.48	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 50 (67%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 18.1		Intersection LOS: B	
Intersection Capacity Utilization 56.0%		ICU Level of Service B	
Analysis Period (min) 15			

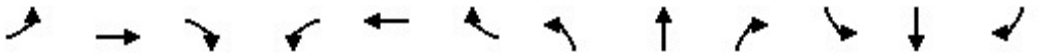
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	461	47	67	487	0	0	0	0	177	2	71
Future Volume (vph)	0	461	47	67	487	0	0	0	0	177	2	71
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	100		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.962	
Flt Protected				0.950							0.966	
Satd. Flow (prot)	0	1782	1530	1653	1800	0	0	0	0	0	1784	0
Flt Permitted				0.310							0.966	
Satd. Flow (perm)	0	1782	1530	539	1800	0	0	0	0	0	1784	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			138								25	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		569			608			453			537	
Travel Time (s)		9.7			10.4			10.3			12.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	1%	0%	1%
Adj. Flow (vph)	0	507	52	74	535	0	0	0	0	195	2	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	507	52	74	535	0	0	0	0	0	275	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												

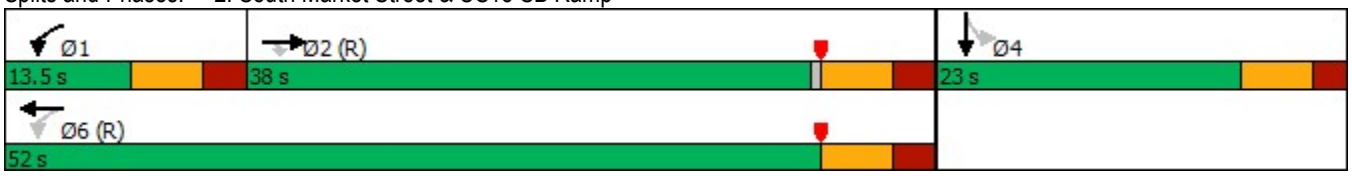


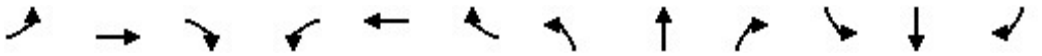
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		38.0	38.0	13.5	52.0					23.0	23.0	
Total Split (%)		50.7%	50.7%	18.0%	69.3%					30.7%	30.7%	
Maximum Green (s)		31.5	31.5	7.0	45.5					17.0	17.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		38.3	38.3	48.9	48.9						15.6	
Actuated g/C Ratio		0.51	0.51	0.65	0.65						0.21	
v/c Ratio		0.56	0.06	0.16	0.46						0.70	
Control Delay		16.4	1.3	5.5	6.9						34.9	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		16.4	1.3	5.5	6.9						34.9	
LOS		B	A	A	A						C	
Approach Delay		15.0			6.7						34.9	
Approach LOS		B			A						C	
Queue Length 50th (ft)		149	1	7	88						85	
Queue Length 95th (ft)		233	m4	15	124						144	
Internal Link Dist (ft)		489			528			373			457	
Turn Bay Length (ft)			125	100								
Base Capacity (vph)		910	848	470	1173						447	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.56	0.06	0.16	0.46						0.62	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 15.3		Intersection LOS: B	
Intersection Capacity Utilization 57.9%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US15 SB Ramp



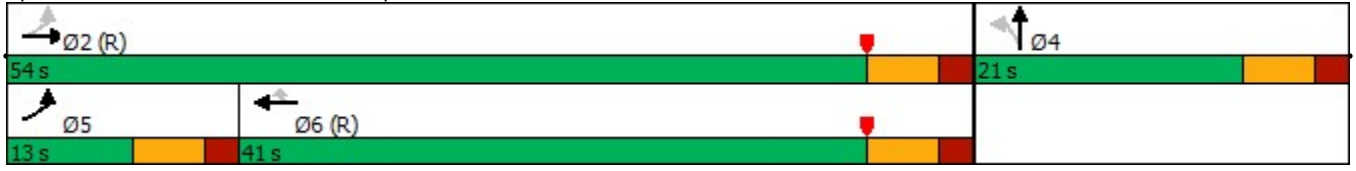


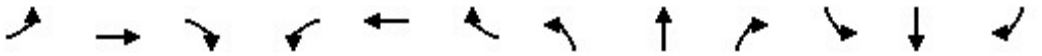
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	514	0	0	413	211	139	1	43	0	0	0
Future Volume (vph)	126	514	0	0	413	211	139	1	43	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.968				
Flt Protected	0.950							0.963				
Satd. Flow (prot)	1676	1740	0	0	1800	1479	0	1799	0	0	0	0
Flt Permitted	0.382							0.963				
Satd. Flow (perm)	674	1740	0	0	1800	1479	0	1799	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						224		19				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	134	547	0	0	439	224	148	1	46	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	134	547	0	0	439	224	0	195	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	13.0	54.0			41.0	41.0	21.0	21.0				
Total Split (%)	17.3%	72.0%			54.7%	54.7%	28.0%	28.0%				
Maximum Green (s)	7.0	48.0			35.0	35.0	15.0	15.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	51.8	51.8			41.4	41.4		13.2				
Actuated g/C Ratio	0.69	0.69			0.55	0.55		0.18				
v/c Ratio	0.24	0.46			0.44	0.24		0.59				
Control Delay	1.6	5.6			13.5	2.5		32.5				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	1.6	5.6			13.5	2.5		32.5				
LOS	A	A			B	A		C				
Approach Delay		4.8			9.8			32.5				
Approach LOS		A			A			C				
Queue Length 50th (ft)	1	75			99	0		60				
Queue Length 95th (ft)	6	114			169	27		107				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	572	1201			993	916		398				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.23	0.46			0.44	0.24		0.49				

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 6 (8%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 10.5		Intersection LOS: B	
Intersection Capacity Utilization 57.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: US15 NB Ramp & South Market Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	300	47	81	335	120	57	62	119	116	84	35
Future Volume (veh/h)	28	300	47	81	335	120	57	62	119	116	84	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1949	1949	1711	1711	1711	1837	1837	1837	1794	1866	1794
Adj Flow Rate, veh/h	30	319	36	86	356	67	61	66	77	123	89	22
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	667	940	887	567	869	874	312	82	96	288	212	53
Arrive On Green	0.03	0.48	0.48	0.11	1.00	1.00	0.05	0.11	0.11	0.09	0.15	0.15
Sat Flow, veh/h	1856	1949	1652	1629	1711	1450	1750	773	902	1709	1445	357
Grp Volume(v), veh/h	30	319	36	86	356	67	61	0	143	123	0	111
Grp Sat Flow(s),veh/h/ln	1856	1949	1652	1629	1711	1450	1750	0	1675	1709	0	1802
Q Serve(g_s), s	0.6	7.6	0.8	1.9	0.0	0.0	2.3	0.0	6.3	4.6	0.0	4.2
Cycle Q Clear(g_c), s	0.6	7.6	0.8	1.9	0.0	0.0	2.3	0.0	6.3	4.6	0.0	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.54	1.00		0.20
Lane Grp Cap(c), veh/h	667	940	887	567	869	874	312	0	179	288	0	265
V/C Ratio(X)	0.04	0.34	0.04	0.15	0.41	0.08	0.20	0.00	0.80	0.43	0.00	0.42
Avail Cap(c_a), veh/h	806	940	887	647	869	874	404	0	179	308	0	265
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.89	0.89	0.89	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.0	12.0	8.2	8.3	0.0	0.0	27.3	0.0	32.7	25.8	0.0	29.1
Incr Delay (d2), s/veh	0.0	1.0	0.1	0.1	1.3	0.2	0.3	0.0	22.2	1.0	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	5.6	0.5	1.0	0.6	0.1	1.7	0.0	6.5	3.3	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.0	13.0	8.3	8.4	1.3	0.2	27.6	0.0	55.0	26.8	0.0	30.1
LnGrp LOS	A	B	A	A	A	A	C	A	D	C	A	C
Approach Vol, veh/h		385			509			204			234	
Approach Delay, s/veh		12.2			2.3			46.8			28.4	
Approach LOS		B			A			D			C	

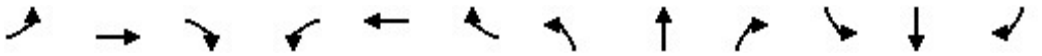
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	41.6	8.8	15.5	7.2	43.5	11.8	12.5
Change Period (Y+Rc), s	* 5.8	6.4	* 5.7	5.5	* 5.8	6.4	* 5.7	5.5
Max Green Setting (Gmax), s	* 7	30.6	* 7	7.0	* 7	30.6	* 7	7.0
Max Q Clear Time (g_c+I1), s	3.9	9.6	4.3	6.2	2.6	2.0	6.6	8.3
Green Ext Time (p_c), s	0.0	3.4	0.0	0.0	0.0	4.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.6
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



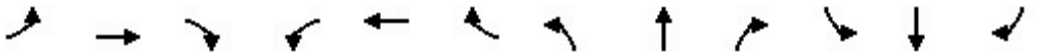
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	461	47	67	487	0	0	0	0	177	2	71
Future Volume (veh/h)	0	461	47	67	487	0	0	0	0	177	2	71
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1800	0				1860	1950	1860
Adj Flow Rate, veh/h	0	507	0	74	535	0				195	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	1	0	0	0	0				1	0	1
Cap, veh/h	0	1049		575	1288	0				265	3	
Arrive On Green	0.00	0.59	0.00	0.11	1.00	0.00				0.14	0.14	0.00
Sat Flow, veh/h	0	1786	1525	1714	1800	0				1839	19	0
Grp Volume(v), veh/h	0	507	0	74	535	0				197	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1800	0				1858	0	0
Q Serve(g_s), s	0.0	12.3	0.0	1.1	0.0	0.0				7.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	12.3	0.0	1.1	0.0	0.0				7.6	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h	0	1049		575	1288	0				268	0	
V/C Ratio(X)	0.00	0.48		0.13	0.42	0.00				0.74	0.00	
Avail Cap(c_a), veh/h	0	1049		663	1288	0				446	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.91	0.00	0.90	0.90	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.9	0.0	5.4	0.0	0.0				30.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.5	0.0	0.1	0.9	0.0				3.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	7.3	0.0	0.5	0.6	0.0				6.4	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	10.4	0.0	5.5	0.9	0.0				34.6	0.0	6.0
LnGrp LOS	A	B		A	A	A				C	A	A
Approach Vol, veh/h		507	A		609						275	A
Approach Delay, s/veh		10.4			1.5						26.5	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.6	49.5		15.8		59.2
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	31.5		17.0		45.5
Max Q Clear Time (g_c+I1), s	3.1	14.3		9.6		2.0
Green Ext Time (p_c), s	0.0	0.3		0.4		0.3

Intersection Summary	
HCM 6th Ctrl Delay	9.7
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	514	0	0	413	211	139	1	43	0	0	0
Future Volume (veh/h)	126	514	0	0	413	211	139	1	43	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1772	1800	0	0	1800	1800	1837	1911	1837			
Adj Flow Rate, veh/h	134	547	0	0	439	0	148	1	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	2	0	0	0	0	0	0	0	0			
Cap, veh/h	675	1349	0	0	1115		211	1				
Arrive On Green	0.13	1.00	0.00	0.00	0.62	0.00	0.12	0.12	0.00			
Sat Flow, veh/h	1688	1800	0	0	1800	1525	1808	12	0			
Grp Volume(v), veh/h	134	547	0	0	439	0	149	0	0			
Grp Sat Flow(s),veh/h/ln	1688	1800	0	0	1800	1525	1820	0	0			
Q Serve(g_s), s	1.9	0.0	0.0	0.0	9.2	0.0	5.9	0.0	0.0			
Cycle Q Clear(g_c), s	1.9	0.0	0.0	0.0	9.2	0.0	5.9	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		0.00			
Lane Grp Cap(c), veh/h	675	1349	0	0	1115		213	0				
V/C Ratio(X)	0.20	0.41	0.00	0.00	0.39		0.70	0.00				
Avail Cap(c_a), veh/h	748	1349	0	0	1115		388	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.81	0.81	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	4.1	0.0	0.0	0.0	7.2	0.0	31.8	0.0	0.0			
Incr Delay (d2), s/veh	0.1	0.7	0.0	0.0	1.0	0.0	4.1	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	0.7	0.5	0.0	0.0	5.4	0.0	5.0	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	4.2	0.7	0.0	0.0	8.2	0.0	36.0	0.0	6.0			
LnGrp LOS	A	A	A	A	A		D	A	A			
Approach Vol, veh/h		681			439	A		195	A			
Approach Delay, s/veh		1.4			8.2			28.9				
Approach LOS		A			A			C				

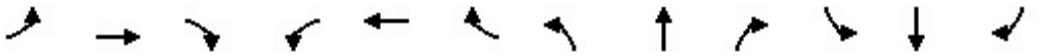
Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		61.2		13.8	9.8	51.5			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		48.0		15.0	7.0	35.0			
Max Q Clear Time (g_c+I1), s		2.0		7.9	3.9	11.2			
Green Ext Time (p_c), s		0.3		0.2	0.1	0.2			

Intersection Summary	
HCM 6th Ctrl Delay	7.8
HCM 6th LOS	A

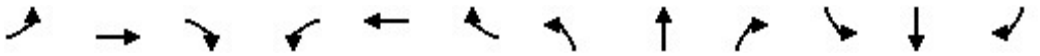
Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

2022 Opening Year Build Scenario
Saturday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	251	85	177	285	120	97	97	205	236	122	112
Future Volume (vph)	100	251	85	177	285	120	97	97	205	236	122	112
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		0	200		185	175		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	50			75			100			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.962				0.850		0.898			0.928	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	1707	0	1620	1764	1499	1604	1624	0	1645	1717	0
Flt Permitted	0.512			0.401			0.521			0.213		
Satd. Flow (perm)	909	1707	0	684	1764	1499	880	1624	0	369	1717	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23				178		107			48	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			370			468			336	
Travel Time (s)		14.1			6.3			12.8			6.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	106	267	90	188	303	128	103	103	218	251	130	119
Shared Lane Traffic (%)												
Lane Group Flow (vph)	106	357	0	188	303	128	103	321	0	251	249	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	34	34		34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40		40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0		3.0	10.0	10.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	10.6	39.6		9.6	16.6	16.6	10.5	9.5		9.5	9.5	
Total Split (s)	13.3	38.7		13.3	38.7	38.7	12.2	18.0		15.0	20.8	
Total Split (%)	15.6%	45.5%		15.6%	45.5%	45.5%	14.4%	21.2%		17.6%	24.5%	
Maximum Green (s)	7.0	32.3		7.0	32.3	32.3	7.0	12.6		9.8	15.4	
Yellow Time (s)	3.0	4.4		3.0	4.4	4.4	3.0	3.0		3.0	3.0	
All-Red Time (s)	3.3	2.0		3.3	2.0	2.0	2.2	2.4		2.2	2.4	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	5.3	5.4		5.3	5.4	5.4	4.2	4.4		4.2	4.4	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0		3.0	6.0	6.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0		0.0	25.0	25.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0		0.0	13.0	13.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		26.0			26.0	26.0		17.0			17.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	41.2	33.3		42.5	36.0	36.0	21.6	13.6		27.7	18.8	
Actuated g/C Ratio	0.48	0.39		0.50	0.42	0.42	0.25	0.16		0.33	0.22	
v/c Ratio	0.21	0.52		0.44	0.41	0.17	0.36	0.92		0.89	0.60	
Control Delay	10.5	21.8		9.0	14.8	1.8	24.0	57.2		57.4	32.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	10.5	21.8		9.0	14.8	1.8	24.0	57.2		57.4	32.0	
LOS	B	C		A	B	A	C	E		E	C	
Approach Delay		19.2			10.4			49.1			44.7	
Approach LOS		B			B			D			D	
Queue Length 50th (ft)	20	106		18	83	6	31	92		83	80	
Queue Length 95th (ft)	39	172		m33	m129	m13	60	#219		#183	#148	
Internal Link Dist (ft)		747			290			388			256	
Turn Bay Length (ft)	175			200		185	175			150		
Base Capacity (vph)	515	682		429	746	736	293	349		282	418	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.21	0.52		0.44	0.41	0.17	0.35	0.92		0.89	0.60	

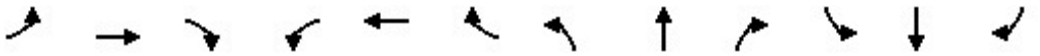
Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 85			
Offset: 6 (7%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 29.2		Intersection LOS: C	
Intersection Capacity Utilization 78.3%		ICU Level of Service D	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

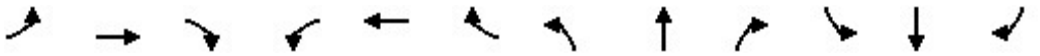
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	556	109	67	592	0	0	0	0	177	2	138
Future Volume (vph)	0	556	109	67	592	0	0	0	0	177	2	138
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	90		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.941	
Flt Protected				0.950							0.973	
Satd. Flow (prot)	0	1782	1530	1653	1800	0	0	0	0	0	1758	0
Flt Permitted				0.240							0.973	
Satd. Flow (perm)	0	1782	1530	418	1800	0	0	0	0	0	1758	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			122								44	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		199			608			453			537	
Travel Time (s)		3.4			10.4			10.3			12.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	1%	0%	1%
Adj. Flow (vph)	0	611	120	74	651	0	0	0	0	195	2	152
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	611	120	74	651	0	0	0	0	0	349	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												

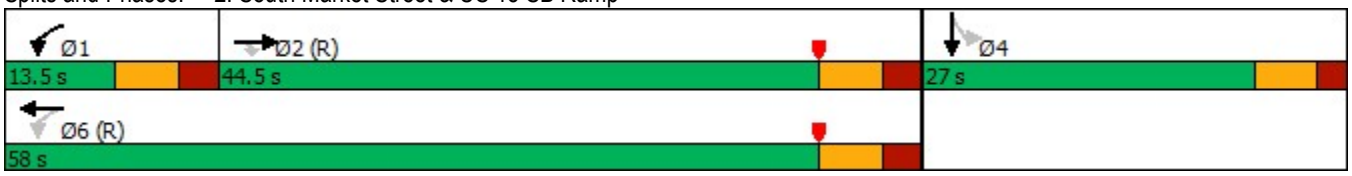


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		44.5	44.5	13.5	58.0					27.0	27.0	
Total Split (%)		52.4%	52.4%	15.9%	68.2%					31.8%	31.8%	
Maximum Green (s)		38.0	38.0	7.0	51.5					21.0	21.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		44.3	44.3	54.9	54.9						19.6	
Actuated g/C Ratio		0.52	0.52	0.65	0.65						0.23	
v/c Ratio		0.66	0.14	0.19	0.56						0.80	
Control Delay		18.6	3.7	5.5	9.2						40.9	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		18.6	3.7	5.5	9.2						40.9	
LOS		B	A	A	A						D	
Approach Delay		16.1			8.8						40.9	
Approach LOS		B			A						D	
Queue Length 50th (ft)		201	8	6	135						120	
Queue Length 95th (ft)		m260	m7	m11	171						#200	
Internal Link Dist (ft)		119			528			373			457	
Turn Bay Length (ft)			125	90								
Base Capacity (vph)		927	855	386	1163						487	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.66	0.14	0.19	0.56						0.72	

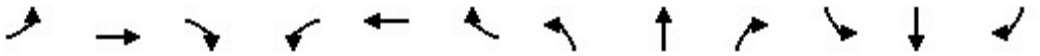
Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 85			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 18.0		Intersection LOS: B	
Intersection Capacity Utilization 67.5%		ICU Level of Service C	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US 15 SB Ramp



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	545	0	0	447	211	210	1	43	0	0	0
Future Volume (vph)	190	545	0	0	447	211	210	1	43	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.977				
Flt Protected	0.950							0.960				
Satd. Flow (prot)	1693	1740	0	0	1800	1479	0	1810	0	0	0	0
Flt Permitted	0.340							0.960				
Satd. Flow (perm)	606	1740	0	0	1800	1479	0	1810	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						224		12				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	202	580	0	0	476	224	223	1	46	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	202	580	0	0	476	224	0	270	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												

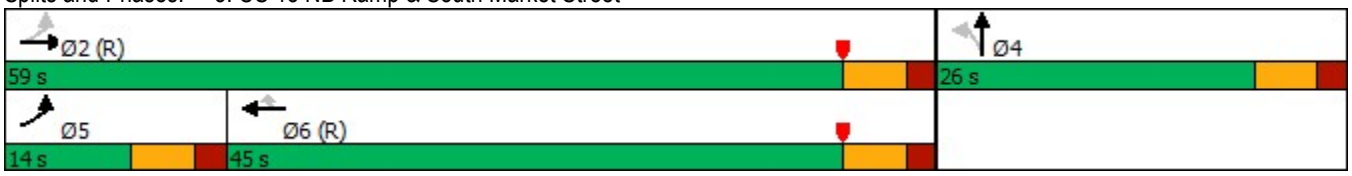


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	14.0	59.0			45.0	45.0	26.0	26.0				
Total Split (%)	16.5%	69.4%			52.9%	52.9%	30.6%	30.6%				
Maximum Green (s)	8.0	53.0			39.0	39.0	20.0	20.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	57.3	57.3			43.5	43.5		17.7				
Actuated g/C Ratio	0.67	0.67			0.51	0.51		0.21				
v/c Ratio	0.39	0.49			0.52	0.26		0.70				
Control Delay	6.6	7.6			17.2	2.8		39.4				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	6.6	7.6			17.2	2.8		39.4				
LOS	A	A			B	A		D				
Approach Delay		7.4			12.6			39.4				
Approach LOS		A			B			D				
Queue Length 50th (ft)	9	98			131	0		102				
Queue Length 95th (ft)	m33	149			215	29		161				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	523	1172			921	866		456				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.39	0.49			0.52	0.26		0.59				

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 85			
Offset: 4 (5%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 14.4		Intersection LOS: B	
Intersection Capacity Utilization 67.5%		ICU Level of Service C	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

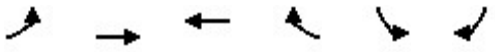
Splits and Phases: 3: US 15 NB Ramp & South Market Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	234	33	210	107	37	235
Future Volume (vph)	234	33	210	107	37	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		0%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.954			
Flt Protected	0.950					0.993
Satd. Flow (prot)	1770	1583	1777	0	0	1825
Flt Permitted	0.950					0.993
Satd. Flow (perm)	1770	1583	1777	0	0	1825
Link Speed (mph)	25		30			25
Link Distance (ft)	189		336			230
Travel Time (s)	5.2		7.6			6.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	260	37	233	119	41	261
Shared Lane Traffic (%)						
Lane Group Flow (vph)	260	37	352	0	0	302
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.0%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	692	582	126	0	0
Future Volume (vph)	0	692	582	126	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	1900	1844	1552	0	0
Flt Permitted						
Satd. Flow (perm)	0	1900	1844	1552	0	0
Link Speed (mph)		30	40		30	
Link Distance (ft)		370	199		166	
Travel Time (s)		8.4	3.4		3.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	2%	0%	0%
Adj. Flow (vph)	0	769	647	140	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	769	647	140	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	39.8%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	21	72	325	0	156	228
Future Volume (vph)	21	72	325	0	156	228
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-1%		-4%			4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950					0.980
Satd. Flow (prot)	1778	1591	1900	0	0	1779
Flt Permitted	0.950					0.980
Satd. Flow (perm)	1778	1591	1900	0	0	1779
Link Speed (mph)	25		25			25
Link Distance (ft)	288		455			468
Travel Time (s)	7.9		12.4			12.8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	23	80	361	0	173	253
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	80	361	0	0	426
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.97	0.97	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	73	252	23	0	249
Future Volume (vph)	0	73	252	23	0	249
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%		1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865	0.989			
Flt Protected						
Satd. Flow (prot)	0	1603	1833	0	0	1835
Flt Permitted						
Satd. Flow (perm)	0	1603	1833	0	0	1835
Link Speed (mph)	25		25			25
Link Distance (ft)	296		186			455
Travel Time (s)	8.1		5.1			12.4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	2%	2%	2%	0%	3%
Adj. Flow (vph)	0	81	280	26	0	277
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	81	306	0	0	277
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	25.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	251	85	177	285	120	97	97	205	236	122	112
Future Volume (veh/h)	100	251	85	177	285	120	97	97	205	236	122	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1949	1949	1711	1711	1711	1837	1837	1837	1794	1866	1794
Adj Flow Rate, veh/h	106	267	64	188	303	66	103	103	131	251	130	70
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	518	595	143	490	722	611	345	118	150	327	240	129
Arrive On Green	0.06	0.39	0.39	0.09	0.42	0.42	0.08	0.16	0.16	0.13	0.21	0.21
Sat Flow, veh/h	1856	1519	364	1629	1711	1450	1750	735	934	1709	1141	614
Grp Volume(v), veh/h	106	0	331	188	303	66	103	0	234	251	0	200
Grp Sat Flow(s),veh/h/ln	1856	0	1883	1629	1711	1450	1750	0	1669	1709	0	1756
Q Serve(g_s), s	2.8	0.0	11.0	5.7	10.6	2.3	4.1	0.0	11.6	10.1	0.0	8.6
Cycle Q Clear(g_c), s	2.8	0.0	11.0	5.7	10.6	2.3	4.1	0.0	11.6	10.1	0.0	8.6
Prop In Lane	1.00		0.19	1.00		1.00	1.00		0.56	1.00		0.35
Lane Grp Cap(c), veh/h	518	0	738	490	722	611	345	0	267	327	0	369
V/C Ratio(X)	0.20	0.00	0.45	0.38	0.42	0.11	0.30	0.00	0.88	0.77	0.00	0.54
Avail Cap(c_a), veh/h	573	0	738	490	722	611	375	0	267	327	0	369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.8	0.0	19.1	13.6	17.3	14.9	26.4	0.0	34.9	25.0	0.0	29.9
Incr Delay (d2), s/veh	0.2	0.0	2.0	0.5	1.8	0.4	0.5	0.0	26.2	10.5	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.0	0.0	8.4	3.5	7.5	1.5	3.1	0.0	10.8	8.4	0.0	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.0	0.0	21.0	14.1	19.1	15.2	26.9	0.0	61.0	35.5	0.0	31.6
LnGrp LOS	B	A	C	B	B	B	C	A	E	D	A	C
Approach Vol, veh/h		437			557			337			451	
Approach Delay, s/veh		19.3			16.9			50.6			33.7	
Approach LOS		B			B			D			C	

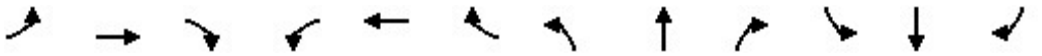
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	38.7	10.7	22.3	10.8	41.2	15.0	18.0
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 7	32.3	* 7	15.4	* 7	32.3	* 9.8	12.6
Max Q Clear Time (g_c+I1), s	7.7	13.0	6.1	10.6	4.8	12.6	12.1	13.6
Green Ext Time (p_c), s	0.0	3.1	0.0	0.2	0.0	3.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	28.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



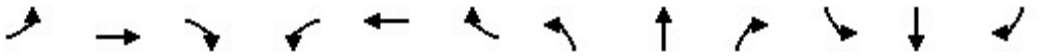
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	556	109	67	592	0	0	0	0	177	2	138
Future Volume (veh/h)	0	556	109	67	592	0	0	0	0	177	2	138
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1800	0				1860	1950	1860
Adj Flow Rate, veh/h	0	611	0	74	651	0				195	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	1	0	0	0	0				1	0	1
Cap, veh/h	0	1107		501	1323	0				260	3	
Arrive On Green	0.00	0.62	0.00	0.10	1.00	0.00				0.14	0.14	0.00
Sat Flow, veh/h	0	1786	1525	1714	1800	0				1839	19	0
Grp Volume(v), veh/h	0	611	0	74	651	0				197	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1800	0				1858	0	0
Q Serve(g_s), s	0.0	16.8	0.0	1.2	0.0	0.0				8.7	0.0	0.0
Cycle Q Clear(g_c), s	0.0	16.8	0.0	1.2	0.0	0.0				8.7	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h	0	1107		501	1323	0				262	0	
V/C Ratio(X)	0.00	0.55		0.15	0.49	0.00				0.75	0.00	
Avail Cap(c_a), veh/h	0	1107		575	1323	0				481	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.84	0.84	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	9.3	0.0	6.1	0.0	0.0				35.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.0	0.0	0.1	1.1	0.0				4.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	9.8	0.0	0.5	0.7	0.0				7.5	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	11.3	0.0	6.2	1.1	0.0				39.4	0.0	6.0
LnGrp LOS	A	B		A	A	A				D	A	A
Approach Vol, veh/h		611	A		725						349	A
Approach Delay, s/veh		11.3			1.6						24.8	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.8	58.2		17.0		68.0
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	38.0		21.0		51.5
Max Q Clear Time (g_c+I1), s	3.2	18.8		10.7		2.0
Green Ext Time (p_c), s	0.0	0.3		0.5		0.4

Intersection Summary		
HCM 6th Ctrl Delay		9.9
HCM 6th LOS		A

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	545	0	0	447	211	210	1	43	0	0	0
Future Volume (veh/h)	190	545	0	0	447	211	210	1	43	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1800	0	0	1800	1800	1837	1911	1837			
Adj Flow Rate, veh/h	202	580	0	0	476	0	223	1	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	1	0	0	0	0	0	0	0	0			
Cap, veh/h	604	1304	0	0	1053		286	1				
Arrive On Green	0.16	1.00	0.00	0.00	0.59	0.00	0.16	0.16	0.00			
Sat Flow, veh/h	1701	1800	0	0	1800	1525	1812	8	0			
Grp Volume(v), veh/h	202	580	0	0	476	0	224	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1800	0	0	1800	1525	1820	0	0			
Q Serve(g_s), s	3.8	0.0	0.0	0.0	12.7	0.0	10.0	0.0	0.0			
Cycle Q Clear(g_c), s	3.8	0.0	0.0	0.0	12.7	0.0	10.0	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	604	1304	0	0	1053		287	0				
V/C Ratio(X)	0.33	0.44	0.00	0.00	0.45		0.78	0.00				
Avail Cap(c_a), veh/h	647	1304	0	0	1053		450	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.70	0.70	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	5.7	0.0	0.0	0.0	9.9	0.0	34.4	0.0	0.0			
Incr Delay (d2), s/veh	0.2	0.8	0.0	0.0	1.4	0.0	4.6	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	1.5	0.5	0.0	0.0	8.1	0.0	8.3	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	6.0	0.8	0.0	0.0	11.3	0.0	38.9	0.0	6.0			
LnGrp LOS	A	A	A	A	B		D	A	A			
Approach Vol, veh/h		782			476	A		270	A			
Approach Delay, s/veh		2.1			11.3			33.3				
Approach LOS		A			B			C				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		66.6		18.4	11.8	54.7			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		53.0		20.0	8.0	39.0			
Max Q Clear Time (g_c+I1), s		2.0		12.0	5.8	14.7			
Green Ext Time (p_c), s		0.3		0.4	0.1	0.2			

Intersection Summary		
HCM 6th Ctrl Delay		10.5
HCM 6th LOS		B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	6.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	234	33	210	107	37	235
Future Vol, veh/h	234	33	210	107	37	235
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	260	37	233	119	41	261

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	636	293	0	0	352	0
Stage 1	293	-	-	-	-	-
Stage 2	343	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.3	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	497	792	-	-	909	-
Stage 1	803	-	-	-	-	-
Stage 2	823	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	471	792	-	-	909	-
Mov Cap-2 Maneuver	471	-	-	-	-	-
Stage 1	803	-	-	-	-	-
Stage 2	779	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.2	0	1.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	471	792	909	-
HCM Lane V/C Ratio	-	-	0.552	0.046	0.045	-
HCM Control Delay (s)	-	-	21.7	9.8	9.1	0
HCM Lane LOS	-	-	C	A	A	A
HCM 95th %tile Q(veh)	-	-	3.3	0.1	0.1	-

Intersection	
Int Delay, s/veh	3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	21	72	325	0	156	228
Future Vol, veh/h	21	72	325	0	156	228
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-4	-	-	4
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	23	80	361	0	173	253

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	960	361	0	0	361	0
Stage 1	361	-	-	-	-	-
Stage 2	599	-	-	-	-	-
Critical Hdwy	6.22	6.12	-	-	4.3	-
Critical Hdwy Stg 1	6.2	-	-	-	-	-
Critical Hdwy Stg 2	5.22	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	332	731	-	-	903	-
Stage 1	746	-	-	-	-	-
Stage 2	640	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	258	731	-	-	903	-
Mov Cap-2 Maneuver	258	-	-	-	-	-
Stage 1	746	-	-	-	-	-
Stage 2	497	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.7	0	4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	258	731	903	-
HCM Lane V/C Ratio	-	-	0.09	0.109	0.192	-
HCM Control Delay (s)	-	-	20.3	10.5	9.9	0
HCM Lane LOS	-	-	C	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.4	0.7	-

Intersection	
Int Delay, s/veh	1.2

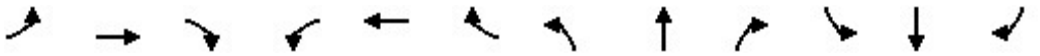
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	73	252	23	0	249
Future Vol, veh/h	0	73	252	23	0	249
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	1	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	2	2	0	3
Mvmt Flow	0	81	280	26	0	277

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	293	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.32	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	786	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	786	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

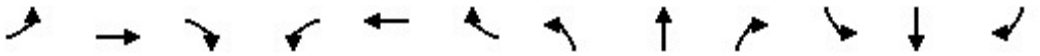
Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	786	-
HCM Lane V/C Ratio	-	-	0.103	-
HCM Control Delay (s)	-	-	10.1	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.3	-

2022 Opening Year Build Scenario With Adjacent Development Saturday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	251	85	177	285	120	97	97	205	236	122	112
Future Volume (vph)	100	251	85	177	285	120	97	97	205	236	122	112
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		225	200		185	175		0	150		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	50			75			100			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.898			0.928	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	1775	1509	1620	1764	1499	1604	1624	0	1645	1717	0
Flt Permitted	0.495			0.492			0.599			0.180		
Satd. Flow (perm)	879	1775	1509	839	1764	1499	1011	1624	0	312	1717	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			161			128		101			48	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			370			468			336	
Travel Time (s)		14.1			6.3			12.8			6.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	106	267	90	188	303	128	103	103	218	251	130	119
Shared Lane Traffic (%)												
Lane Group Flow (vph)	106	267	90	188	303	128	103	321	0	251	249	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	34	34	20	34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6	0	-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6	0	-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40	20	40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	3	1	6	7	3	8		7	4	
Switch Phase												

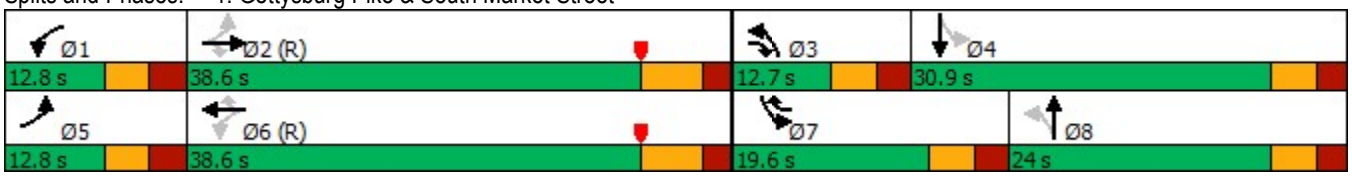


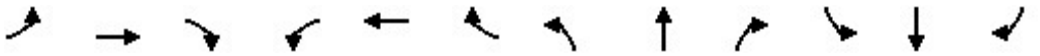
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0	3.0	3.0	10.0	3.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	10.6	39.6	10.5	9.6	16.6	9.5	10.5	9.5		9.5	9.5	
Total Split (s)	12.8	38.6	12.7	12.8	38.6	19.6	12.7	24.0		19.6	30.9	
Total Split (%)	13.5%	40.6%	13.4%	13.5%	40.6%	20.6%	13.4%	25.3%		20.6%	32.5%	
Maximum Green (s)	7.0	32.2	7.0	7.0	32.2	13.9	7.0	18.5		13.9	25.4	
Yellow Time (s)	3.2	4.4	3.2	3.2	4.4	3.2	3.2	3.2		3.2	3.2	
All-Red Time (s)	2.6	2.0	2.5	2.6	2.0	2.5	2.5	2.3		2.5	2.3	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.8	5.4	4.7	4.8	5.4	4.7	4.7	4.5		4.7	4.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0	3.0	3.0	6.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0	0.0	0.0	13.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max	None	None	C-Max	None	None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			22.0			22.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	43.9	35.5	48.8	45.1	38.1	58.0	25.2	17.5		36.6	24.2	
Actuated g/C Ratio	0.46	0.37	0.51	0.47	0.40	0.61	0.27	0.18		0.39	0.25	
v/c Ratio	0.22	0.40	0.11	0.41	0.43	0.13	0.32	0.84		0.77	0.53	
Control Delay	14.3	25.1	0.4	11.3	18.9	3.3	22.0	45.4		38.8	28.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	14.3	25.1	0.4	11.3	18.9	3.3	22.0	45.4		38.8	28.2	
LOS	B	C	A	B	B	A	C	D		D	C	
Approach Delay		17.8			13.4			39.7			33.5	
Approach LOS		B			B			D			C	
Queue Length 50th (ft)	27	98	0	45	98	10	31	102		83	80	
Queue Length 95th (ft)	50	154	1	m62	m140	m23	58	#207		#163	140	
Internal Link Dist (ft)		747			290			388			256	
Turn Bay Length (ft)	175		225	200		185	175			150		
Base Capacity (vph)	475	663	855	463	706	970	319	413		328	511	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.22	0.40	0.11	0.41	0.43	0.13	0.32	0.78		0.77	0.49	

Intersection Summary			
Area Type:	Other		
Cycle Length: 95			
Actuated Cycle Length: 95			
Offset: 6 (6%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 25.0		Intersection LOS: C	
Intersection Capacity Utilization 72.9%		ICU Level of Service C	
Analysis Period (min) 15			

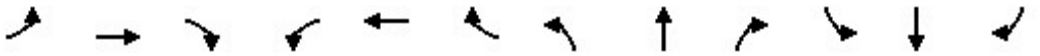
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	556	109	67	592	0	0	0	0	177	2	138
Future Volume (vph)	0	556	109	67	592	0	0	0	0	177	2	138
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	90		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.941	
Flt Protected				0.950							0.973	
Satd. Flow (prot)	0	1782	1530	1653	1800	0	0	0	0	0	1758	0
Flt Permitted				0.258							0.973	
Satd. Flow (perm)	0	1782	1530	449	1800	0	0	0	0	0	1758	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109								40	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		199			608			453			537	
Travel Time (s)		3.4			10.4			10.3			12.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	1%	0%	1%
Adj. Flow (vph)	0	611	120	74	651	0	0	0	0	195	2	152
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	611	120	74	651	0	0	0	0	0	349	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												

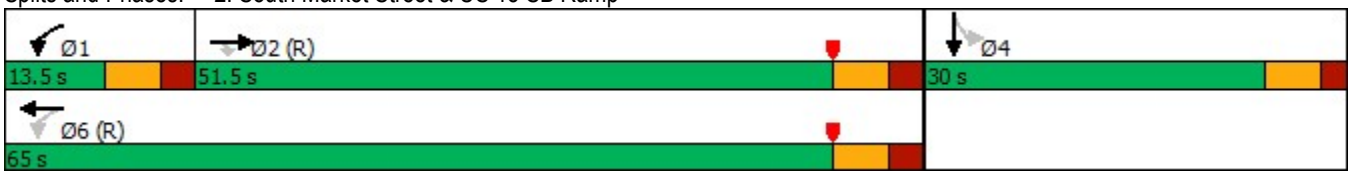


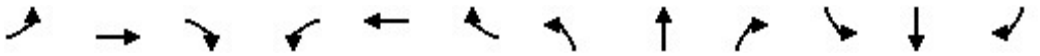
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		51.5	51.5	13.5	65.0					30.0	30.0	
Total Split (%)		54.2%	54.2%	14.2%	68.4%					31.6%	31.6%	
Maximum Green (s)		45.0	45.0	7.0	58.5					24.0	24.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		52.1	52.1	62.8	62.8						21.7	
Actuated g/C Ratio		0.55	0.55	0.66	0.66						0.23	
v/c Ratio		0.63	0.14	0.19	0.55						0.81	
Control Delay		17.1	3.3	5.3	9.7						45.1	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		17.1	3.3	5.3	9.7						45.1	
LOS		B	A	A	A						D	
Approach Delay		14.9			9.3						45.1	
Approach LOS		B			A						D	
Queue Length 50th (ft)		218	4	6	148						139	
Queue Length 95th (ft)		295	m11	11	182						216	
Internal Link Dist (ft)		119			528			373			457	
Turn Bay Length (ft)			125	90								
Base Capacity (vph)		976	888	397	1189						492	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.63	0.14	0.19	0.55						0.71	

Intersection Summary			
Area Type:	Other		
Cycle Length: 95			
Actuated Cycle Length: 95			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 18.5		Intersection LOS: B	
Intersection Capacity Utilization 67.5%		ICU Level of Service C	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US 15 SB Ramp





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	545	0	0	447	211	210	1	43	0	0	0
Future Volume (vph)	190	545	0	0	447	211	210	1	43	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.977				
Flt Protected	0.950							0.960				
Satd. Flow (prot)	1693	1740	0	0	1800	1479	0	1810	0	0	0	0
Flt Permitted	0.349							0.960				
Satd. Flow (perm)	622	1740	0	0	1800	1479	0	1810	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						224		10				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	202	580	0	0	476	224	223	1	46	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	202	580	0	0	476	224	0	270	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	16.0	66.0			50.0	50.0	29.0	29.0				
Total Split (%)	16.8%	69.5%			52.6%	52.6%	30.5%	30.5%				
Maximum Green (s)	10.0	60.0			44.0	44.0	23.0	23.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	65.5	65.5			50.5	50.5		19.5				
Actuated g/C Ratio	0.69	0.69			0.53	0.53		0.21				
v/c Ratio	0.37	0.48			0.50	0.25		0.71				
Control Delay	5.2	7.5			17.6	2.8		44.2				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	5.2	7.5			17.6	2.8		44.2				
LOS	A	A			B	A		D				
Approach Delay		7.0			12.9			44.2				
Approach LOS		A			B			D				
Queue Length 50th (ft)	8	106			143	0		117				
Queue Length 95th (ft)	24	151			235	30		176				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	552	1200			956	891		464				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.37	0.48			0.50	0.25		0.58				

Intersection Summary			
Area Type:	Other		
Cycle Length: 95			
Actuated Cycle Length: 95			
Offset: 4 (4%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 15.1		Intersection LOS: B	
Intersection Capacity Utilization 67.5%		ICU Level of Service C	
Analysis Period (min) 15			

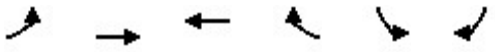
Splits and Phases: 3: US 15 NB Ramp & South Market Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	234	33	210	107	37	235
Future Volume (vph)	234	33	210	107	37	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		0%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.954			
Flt Protected	0.950					0.993
Satd. Flow (prot)	1770	1583	1777	0	0	1825
Flt Permitted	0.950					0.993
Satd. Flow (perm)	1770	1583	1777	0	0	1825
Link Speed (mph)	25		30			25
Link Distance (ft)	189		336			230
Travel Time (s)	5.2		7.6			6.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	260	37	233	119	41	261
Shared Lane Traffic (%)						
Lane Group Flow (vph)	260	37	352	0	0	302
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.0%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	692	582	126	0	0
Future Volume (vph)	0	692	582	126	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	1900	1844	1552	0	0
Flt Permitted						
Satd. Flow (perm)	0	1900	1844	1552	0	0
Link Speed (mph)		30	40		30	
Link Distance (ft)		370	199		166	
Travel Time (s)		8.4	3.4		3.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	2%	0%	0%
Adj. Flow (vph)	0	769	647	140	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	769	647	140	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	39.8%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	21	72	325	0	156	228
Future Volume (vph)	21	72	325	0	156	228
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-1%		-4%			4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950					0.980
Satd. Flow (prot)	1778	1591	1900	0	0	1779
Flt Permitted	0.950					0.980
Satd. Flow (perm)	1778	1591	1900	0	0	1779
Link Speed (mph)	25		25			25
Link Distance (ft)	288		455			468
Travel Time (s)	7.9		12.4			12.8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	23	80	361	0	173	253
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	80	361	0	0	426
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.97	0.97	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	73	252	23	0	249
Future Volume (vph)	0	73	252	23	0	249
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%		1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865	0.989			
Flt Protected						
Satd. Flow (prot)	0	1603	1833	0	0	1835
Flt Permitted						
Satd. Flow (perm)	0	1603	1833	0	0	1835
Link Speed (mph)	25		25			25
Link Distance (ft)	296		186			455
Travel Time (s)	8.1		5.1			12.4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	2%	2%	2%	0%	3%
Adj. Flow (vph)	0	81	280	26	0	277
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	81	306	0	0	277
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	25.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	251	85	177	285	120	97	97	205	236	122	112
Future Volume (veh/h)	100	251	85	177	285	120	97	97	205	236	122	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1949	1949	1711	1711	1711	1837	1837	1837	1794	1866	1794
Adj Flow Rate, veh/h	106	267	64	188	303	66	103	103	131	251	130	70
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	499	770	776	500	715	818	374	125	159	364	276	149
Arrive On Green	0.06	0.40	0.40	0.08	0.42	0.42	0.07	0.17	0.17	0.15	0.24	0.24
Sat Flow, veh/h	1856	1949	1652	1629	1711	1450	1750	735	934	1709	1141	614
Grp Volume(v), veh/h	106	267	64	188	303	66	103	0	234	251	0	200
Grp Sat Flow(s),veh/h/ln	1856	1949	1652	1629	1711	1450	1750	0	1669	1709	0	1756
Q Serve(g_s), s	3.1	9.1	2.0	6.5	11.9	2.0	4.5	0.0	12.9	10.8	0.0	9.3
Cycle Q Clear(g_c), s	3.1	9.1	2.0	6.5	11.9	2.0	4.5	0.0	12.9	10.8	0.0	9.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.56	1.00		0.35
Lane Grp Cap(c), veh/h	499	770	776	500	715	818	374	0	284	364	0	425
V/C Ratio(X)	0.21	0.35	0.08	0.38	0.42	0.08	0.28	0.00	0.83	0.69	0.00	0.47
Avail Cap(c_a), veh/h	541	770	776	500	715	818	391	0	343	382	0	488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.4	20.1	13.9	15.1	19.6	9.4	28.9	0.0	38.1	25.9	0.0	30.8
Incr Delay (d2), s/veh	0.2	1.2	0.2	0.5	1.8	0.2	0.4	0.0	13.0	4.9	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.3	7.5	1.4	4.1	8.4	1.2	3.5	0.0	10.4	8.3	0.0	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.6	21.4	14.1	15.6	21.4	9.6	29.3	0.0	51.0	30.8	0.0	31.6
LnGrp LOS	B	C	B	B	C	A	C	A	D	C	A	C
Approach Vol, veh/h		437			557			337			451	
Approach Delay, s/veh		18.9			18.0			44.4			31.2	
Approach LOS		B			B			D			C	

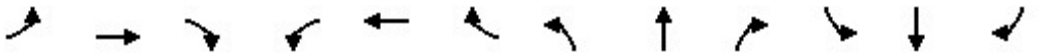
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	43.0	11.8	27.5	10.6	45.1	18.6	20.6
Change Period (Y+Rc), s	* 5.8	6.4	* 5.7	5.5	* 5.8	6.4	* 5.7	5.5
Max Green Setting (Gmax), s	* 7	32.2	* 7	25.4	* 7	32.2	* 14	18.5
Max Q Clear Time (g_c+I1), s	8.5	11.1	6.5	11.3	5.1	13.9	12.8	14.9
Green Ext Time (p_c), s	0.0	3.1	0.0	0.5	0.0	3.3	0.1	0.3

Intersection Summary	
HCM 6th Ctrl Delay	26.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



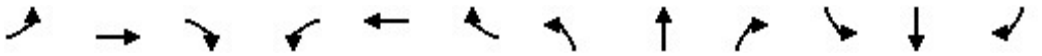
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	556	109	67	592	0	0	0	0	177	2	138
Future Volume (veh/h)	0	556	109	67	592	0	0	0	0	177	2	138
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1800	0				1860	1950	1860
Adj Flow Rate, veh/h	0	611	0	74	651	0				195	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	1	0	0	0	0				1	0	1
Cap, veh/h	0	1155		517	1352	0				254	3	
Arrive On Green	0.00	0.65	0.00	0.09	1.00	0.00				0.14	0.14	0.00
Sat Flow, veh/h	0	1786	1525	1714	1800	0				1839	19	0
Grp Volume(v), veh/h	0	611	0	74	651	0				197	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1800	0				1858	0	0
Q Serve(g_s), s	0.0	17.5	0.0	1.2	0.0	0.0				9.7	0.0	0.0
Cycle Q Clear(g_c), s	0.0	17.5	0.0	1.2	0.0	0.0				9.7	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h	0	1155		517	1352	0				257	0	
V/C Ratio(X)	0.00	0.53		0.14	0.48	0.00				0.77	0.00	
Avail Cap(c_a), veh/h	0	1155		581	1352	0				489	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.86	0.86	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	9.0	0.0	5.9	0.0	0.0				39.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.7	0.0	0.1	1.1	0.0				4.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	10.2	0.0	0.6	0.7	0.0				8.3	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	10.8	0.0	6.0	1.1	0.0				44.2	0.0	6.0
LnGrp LOS	A	B		A	A	A				D	A	A
Approach Vol, veh/h		611	A		725						349	A
Approach Delay, s/veh		10.8			1.6						27.6	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.9	66.9		18.1		76.9
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	45.0		24.0		58.5
Max Q Clear Time (g_c+I1), s	3.2	19.5		11.7		2.0
Green Ext Time (p_c), s	0.0	0.3		0.5		0.4

Intersection Summary	
HCM 6th Ctrl Delay	10.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	545	0	0	447	211	210	1	43	0	0	0
Future Volume (veh/h)	190	545	0	0	447	211	210	1	43	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1800	0	0	1800	1800	1837	1911	1837			
Adj Flow Rate, veh/h	202	580	0	0	476	0	223	1	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	1	0	0	0	0	0	0	0	0			
Cap, veh/h	618	1331	0	0	1101		281	1				
Arrive On Green	0.15	1.00	0.00	0.00	0.61	0.00	0.16	0.16	0.00			
Sat Flow, veh/h	1701	1800	0	0	1800	1525	1812	8	0			
Grp Volume(v), veh/h	202	580	0	0	476	0	224	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1800	0	0	1800	1525	1820	0	0			
Q Serve(g_s), s	4.0	0.0	0.0	0.0	13.3	0.0	11.3	0.0	0.0			
Cycle Q Clear(g_c), s	4.0	0.0	0.0	0.0	13.3	0.0	11.3	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	618	1331	0	0	1101		282	0				
V/C Ratio(X)	0.33	0.44	0.00	0.00	0.43		0.79	0.00				
Avail Cap(c_a), veh/h	687	1331	0	0	1101		460	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.74	0.74	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	5.7	0.0	0.0	0.0	9.7	0.0	38.7	0.0	0.0			
Incr Delay (d2), s/veh	0.2	0.8	0.0	0.0	1.2	0.0	5.0	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	1.7	0.5	0.0	0.0	8.5	0.0	9.1	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	5.9	0.8	0.0	0.0	11.0	0.0	43.7	0.0	6.0			
LnGrp LOS	A	A	A	A	B		D	A	A			
Approach Vol, veh/h		782			476	A		270	A			
Approach Delay, s/veh		2.1			11.0			37.3				
Approach LOS		A			B			D				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		75.3		19.7	12.2	63.1			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		60.0		23.0	10.0	44.0			
Max Q Clear Time (g_c+I1), s		2.0		13.3	6.0	15.3			
Green Ext Time (p_c), s		0.3		0.5	0.2	0.2			

Intersection Summary		
HCM 6th Ctrl Delay	11.1	
HCM 6th LOS	B	

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	6.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	234	33	210	107	37	235
Future Vol, veh/h	234	33	210	107	37	235
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	260	37	233	119	41	261

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	636	293	0	0	352	0
Stage 1	293	-	-	-	-	-
Stage 2	343	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.3	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	497	792	-	-	909	-
Stage 1	803	-	-	-	-	-
Stage 2	823	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	471	792	-	-	909	-
Mov Cap-2 Maneuver	471	-	-	-	-	-
Stage 1	803	-	-	-	-	-
Stage 2	779	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.2	0	1.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	471	792	909	-
HCM Lane V/C Ratio	-	-	0.552	0.046	0.045	-
HCM Control Delay (s)	-	-	21.7	9.8	9.1	0
HCM Lane LOS	-	-	C	A	A	A
HCM 95th %tile Q(veh)	-	-	3.3	0.1	0.1	-

Intersection	
Int Delay, s/veh	3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	21	72	325	0	156	228
Future Vol, veh/h	21	72	325	0	156	228
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-4	-	-	4
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	23	80	361	0	173	253

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	960	361	0	0	361	0
Stage 1	361	-	-	-	-	-
Stage 2	599	-	-	-	-	-
Critical Hdwy	6.22	6.12	-	-	4.3	-
Critical Hdwy Stg 1	6.2	-	-	-	-	-
Critical Hdwy Stg 2	5.22	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	332	731	-	-	903	-
Stage 1	746	-	-	-	-	-
Stage 2	640	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	258	731	-	-	903	-
Mov Cap-2 Maneuver	258	-	-	-	-	-
Stage 1	746	-	-	-	-	-
Stage 2	497	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.7	0	4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	258	731	903	-
HCM Lane V/C Ratio	-	-	0.09	0.109	0.192	-
HCM Control Delay (s)	-	-	20.3	10.5	9.9	0
HCM Lane LOS	-	-	C	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.4	0.7	-

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	73	252	23	0	249
Future Vol, veh/h	0	73	252	23	0	249
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	1	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	2	2	0	3
Mvmt Flow	0	81	280	26	0	277

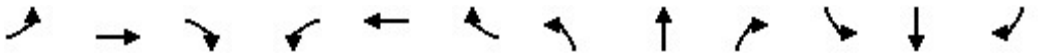
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	293	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.32	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	786	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	786	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	786	-
HCM Lane V/C Ratio	-	-	0.103	-
HCM Control Delay (s)	-	-	10.1	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.3	-

2022 Opening Year Mitigation Scenario
Saturday Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	251	85	177	285	120	97	97	205	236	122	112
Future Volume (vph)	100	251	85	177	285	120	97	97	205	236	122	112
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		225	200		185	175		200	260		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	50			75			100			0		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.962				0.850			0.850		0.928	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	3244	0	1620	1764	1499	1604	1809	1538	1645	1717	0
Flt Permitted	0.511			0.511			0.435			0.617		
Satd. Flow (perm)	907	3244	0	871	1764	1499	734	1809	1538	1068	1717	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		65				128			218		61	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			370			468			336	
Travel Time (s)		14.1			6.3			12.8			6.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	106	267	90	188	303	128	103	103	218	251	130	119
Shared Lane Traffic (%)												
Lane Group Flow (vph)	106	357	0	188	303	128	103	103	218	251	249	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template												
Leading Detector (ft)	34	34		34	34	34	39	39	39	34	34	
Trailing Detector (ft)	-6	-6		-6	-6	-6	-6	-6	-6	-6	-6	
Detector 1 Position(ft)	-6	-6		-6	-6	-6	-6	-6	-6	-6	-6	
Detector 1 Size(ft)	40	40		40	40	40	45	45	45	40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6	7	3	8	1	7	4	
Permitted Phases	2			6		6	8		8	4		
Detector Phase	5	2		1	6	7	3	8	1	7	4	
Switch Phase												

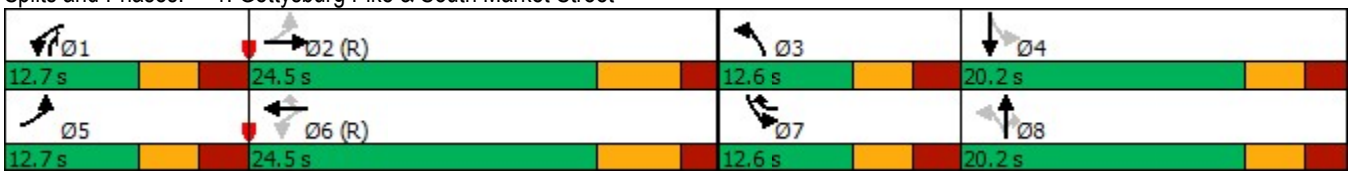


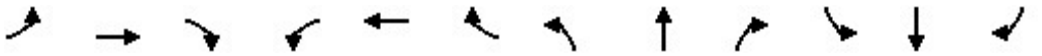
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	10.0	22.4		10.0	26.5	9.7	9.8	21.5	10.0	9.7	21.5	
Total Split (s)	12.7	24.5		12.7	24.5	12.6	12.6	20.2	12.7	12.6	20.2	
Total Split (%)	18.1%	35.0%		18.1%	35.0%	18.0%	18.0%	28.9%	18.1%	18.0%	28.9%	
Maximum Green (s)	7.0	18.1		7.0	18.1	7.0	7.0	14.8	7.0	7.0	14.8	
Yellow Time (s)	3.1	4.4		3.1	4.4	3.1	3.1	3.1	3.1	3.1	3.1	
All-Red Time (s)	2.6	2.0		2.6	2.0	2.5	2.5	2.3	2.6	2.5	2.3	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.7	5.4		4.7	5.4	4.6	4.6	4.4	4.7	4.6	4.4	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0		3.0	6.0	3.0	3.0	3.0	3.0	3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	25.0		0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	13.0		0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	None	None	None	None	None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			22.0			22.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	32.8	24.4		33.9	26.8	41.1	19.2	12.9	22.9	19.4	13.2	
Actuated g/C Ratio	0.47	0.35		0.48	0.38	0.59	0.27	0.18	0.33	0.28	0.19	
v/c Ratio	0.21	0.30		0.37	0.45	0.14	0.35	0.31	0.34	0.70	0.67	
Control Delay	11.5	16.2		7.1	13.4	1.2	17.9	26.0	3.8	28.8	28.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	11.5	16.2		7.1	13.4	1.2	17.9	26.0	3.8	28.8	28.6	
LOS	B	B		A	B	A	B	C	A	C	C	
Approach Delay		15.1			9.0			12.6			28.7	
Approach LOS		B			A			B			C	
Queue Length 50th (ft)	19	40		14	62	3	23	30	0	62	59	
Queue Length 95th (ft)	41	70		m35	123	m4	46	61	29	103	112	
Internal Link Dist (ft)		747			290			388			256	
Turn Bay Length (ft)	175			200		185	175		200	260		
Base Capacity (vph)	518	1173		507	675	933	302	408	652	361	434	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.20	0.30		0.37	0.45	0.14	0.34	0.25	0.33	0.70	0.57	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 50 (71%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 16.1		Intersection LOS: B	
Intersection Capacity Utilization 57.1%		ICU Level of Service B	
Analysis Period (min) 15			

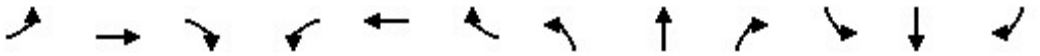
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	556	109	67	592	0	0	0	0	177	2	138
Future Volume (vph)	0	556	109	67	592	0	0	0	0	177	2	138
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	90		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	*0.68	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.941	
Flt Protected				0.950							0.973	
Satd. Flow (prot)	0	2424	1530	1653	1800	0	0	0	0	0	1758	0
Flt Permitted				0.211							0.973	
Satd. Flow (perm)	0	2424	1530	367	1800	0	0	0	0	0	1758	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			148								56	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		199			608			453			537	
Travel Time (s)		3.4			10.4			10.3			12.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	1%	0%	1%
Adj. Flow (vph)	0	611	120	74	651	0	0	0	0	195	2	152
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	611	120	74	651	0	0	0	0	0	349	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												

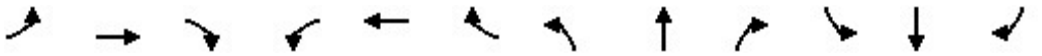


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		31.5	31.5	13.5	45.0					25.0	25.0	
Total Split (%)		45.0%	45.0%	19.3%	64.3%					35.7%	35.7%	
Maximum Green (s)		25.0	25.0	7.0	38.5					19.0	19.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		31.9	31.9	42.5	42.5						17.0	
Actuated g/C Ratio		0.46	0.46	0.61	0.61						0.24	
v/c Ratio		0.55	0.15	0.20	0.60						0.74	
Control Delay		16.8	3.4	7.3	10.0						30.3	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		16.8	3.4	7.3	10.0						30.3	
LOS		B	A	A	A						C	
Approach Delay		14.6			9.7						30.3	
Approach LOS		B			A						C	
Queue Length 50th (ft)		110	2	14	144						91	
Queue Length 95th (ft)		157	m16	m19	204						155	
Internal Link Dist (ft)		119			528			373			457	
Turn Bay Length (ft)			125	90								
Base Capacity (vph)		1104	777	370	1092						542	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.55	0.15	0.20	0.60						0.64	

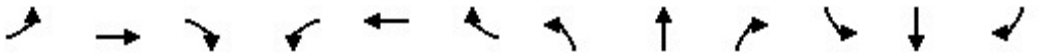
Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 15.7		Intersection LOS: B	
Intersection Capacity Utilization 63.5%		ICU Level of Service B	
Analysis Period (min) 15			
* User Entered Value			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 2: South Market Street & US 15 SB Ramp





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	545	0	0	447	211	210	1	43	0	0	0
Future Volume (vph)	190	545	0	0	447	211	210	1	43	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	0		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	0			25			25			25		
Lane Util. Factor	*1.00	*1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.977				
Flt Protected	0.950							0.960				
Satd. Flow (prot)	1693	1740	0	0	1800	1479	0	1810	0	0	0	0
Flt Permitted	0.304							0.960				
Satd. Flow (perm)	542	1740	0	0	1800	1479	0	1810	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						224		14				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	202	580	0	0	476	224	223	1	46	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	202	580	0	0	476	224	0	270	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		23			23			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												

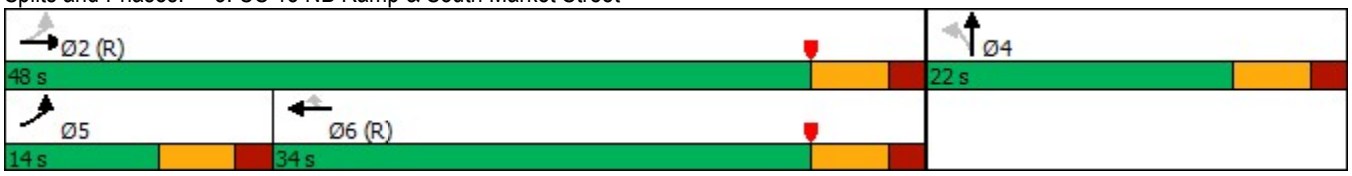


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	14.0	48.0			34.0	34.0	22.0	22.0				
Total Split (%)	20.0%	68.6%			48.6%	48.6%	31.4%	31.4%				
Maximum Green (s)	8.0	42.0			28.0	28.0	16.0	16.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	45.1	45.1			31.4	31.4		14.9				
Actuated g/C Ratio	0.64	0.64			0.45	0.45		0.21				
v/c Ratio	0.41	0.52			0.59	0.28		0.68				
Control Delay	5.7	6.2			19.1	3.2		32.9				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	5.7	6.2			19.1	3.2		32.9				
LOS	A	A			B	A		C				
Approach Delay		6.1			14.0			32.9				
Approach LOS		A			B			C				
Queue Length 50th (ft)	14	109			123	0		79				
Queue Length 95th (ft)	9	126			203	29		137				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)						260						
Base Capacity (vph)	496	1119			806	786		450				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.41	0.52			0.59	0.28		0.60				

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 34 (49%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 13.4		Intersection LOS: B	
Intersection Capacity Utilization 63.5%		ICU Level of Service B	
Analysis Period (min) 15			

* User Entered Value

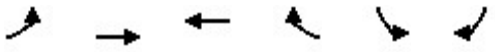
Splits and Phases: 3: US 15 NB Ramp & South Market Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	234	33	210	107	37	235
Future Volume (vph)	234	33	210	107	37	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		0%			1%
Storage Length (ft)	0	0		0	75	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.954			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1777	0	1761	1835
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	1777	0	1761	1835
Link Speed (mph)	25		30			25
Link Distance (ft)	189		336			230
Travel Time (s)	5.2		7.6			6.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	260	37	233	119	41	261
Shared Lane Traffic (%)						
Lane Group Flow (vph)	260	37	352	0	41	261
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.9%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	692	582	126	0	0
Future Volume (vph)	0	692	582	126	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	4%		0%	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	3610	1844	1552	0	0
Flt Permitted						
Satd. Flow (perm)	0	3610	1844	1552	0	0
Link Speed (mph)		30	40		30	
Link Distance (ft)		370	199		166	
Travel Time (s)		8.4	3.4		3.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	2%	0%	0%
Adj. Flow (vph)	0	769	647	140	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	769	647	140	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.0%		ICU Level of Service A	
Analysis Period (min) 15			



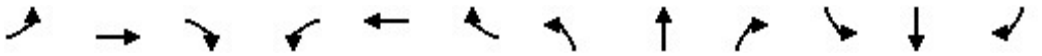
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	21	72	325	0	156	228
Future Volume (vph)	21	72	325	0	156	228
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-1%		-4%			4%
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1778	1591	1900	0	1734	1808
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1778	1591	1900	0	1734	1808
Link Speed (mph)	25		25			25
Link Distance (ft)	288		455			468
Travel Time (s)	7.9		12.4			12.8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	23	80	361	0	173	253
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	80	361	0	173	253
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.97	0.97	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.1%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	73	252	23	0	249
Future Volume (vph)	0	73	252	23	0	249
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%		1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865	0.989			
Flt Protected						
Satd. Flow (prot)	0	1603	1833	0	0	1835
Flt Permitted						
Satd. Flow (perm)	0	1603	1833	0	0	1835
Link Speed (mph)	25		25			25
Link Distance (ft)	296		186			455
Travel Time (s)	8.1		5.1			12.4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	2%	2%	2%	0%	3%
Adj. Flow (vph)	0	81	280	26	0	277
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	81	306	0	0	277
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	25.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	251	85	177	285	120	97	97	205	236	122	112
Future Volume (veh/h)	100	251	85	177	285	120	97	97	205	236	122	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1949	1949	1711	1711	1711	1837	1837	1837	1794	1866	1794
Adj Flow Rate, veh/h	106	267	64	188	303	66	103	103	131	251	130	70
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	543	1137	268	585	720	775	301	227	359	377	177	95
Arrive On Green	0.07	0.38	0.38	0.11	0.42	0.42	0.08	0.12	0.12	0.11	0.16	0.16
Sat Flow, veh/h	1856	2974	700	1629	1711	1450	1750	1837	1557	1709	1141	614
Grp Volume(v), veh/h	106	164	167	188	303	66	103	103	131	251	0	200
Grp Sat Flow(s),veh/h/ln	1856	1852	1823	1629	1711	1450	1750	1837	1557	1709	0	1756
Q Serve(g_s), s	2.3	4.2	4.3	4.7	8.7	1.6	3.5	3.6	4.9	8.0	0.0	7.6
Cycle Q Clear(g_c), s	2.3	4.2	4.3	4.7	8.7	1.6	3.5	3.6	4.9	8.0	0.0	7.6
Prop In Lane	1.00		0.38	1.00		1.00	1.00		1.00	1.00		0.35
Lane Grp Cap(c), veh/h	543	708	697	585	720	775	301	227	359	377	0	272
V/C Ratio(X)	0.20	0.23	0.24	0.32	0.42	0.09	0.34	0.45	0.36	0.67	0.00	0.73
Avail Cap(c_a), veh/h	627	708	697	596	720	775	357	415	518	377	0	396
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.5	14.7	14.7	10.5	14.3	7.9	23.7	28.5	22.6	24.5	0.0	28.2
Incr Delay (d2), s/veh	0.2	0.8	0.8	0.3	1.8	0.2	0.7	1.4	0.6	4.4	0.0	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	3.1	3.1	2.6	5.9	0.9	2.6	3.0	3.3	7.0	0.0	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.6	15.4	15.5	10.8	16.1	8.1	24.4	29.9	23.2	28.9	0.0	32.1
LnGrp LOS	B	B	B	B	B	A	C	C	C	C	A	C
Approach Vol, veh/h		437			557			337			451	
Approach Delay, s/veh		14.5			13.4			25.6			30.3	
Approach LOS		B			B			C			C	

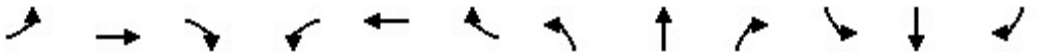
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	32.2	10.4	15.3	9.5	34.8	12.6	13.0
Change Period (Y+Rc), s	5.7	6.4	5.6	* 5.4	5.7	6.4	5.6	* 5.4
Max Green Setting (Gmax), s	7.0	18.1	7.0	* 15	7.0	18.1	7.0	* 15
Max Q Clear Time (g_c+I1), s	6.7	6.3	5.5	9.6	4.3	10.7	10.0	6.9
Green Ext Time (p_c), s	0.0	2.3	0.0	0.3	0.1	1.9	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	20.3
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



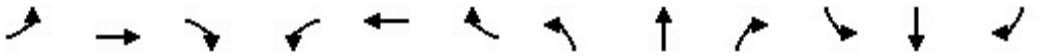
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	556	109	67	592	0	0	0	0	177	2	138
Future Volume (veh/h)	0	556	109	67	592	0	0	0	0	177	2	138
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1800	0				1860	1950	1860
Adj Flow Rate, veh/h	0	611	0	74	651	0				195	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	1	0	0	0	0				1	0	1
Cap, veh/h	0	1375		530	1265	0				271	3	
Arrive On Green	0.00	0.57	0.00	0.04	0.47	0.00				0.15	0.15	0.00
Sat Flow, veh/h	0	3000	1525	1714	1800	0				1839	19	0
Grp Volume(v), veh/h	0	611	0	74	651	0				197	0	0
Grp Sat Flow(s),veh/h/ln	0	1214	1525	1714	1800	0				1858	0	0
Q Serve(g_s), s	0.0	10.2	0.0	1.1	17.7	0.0				7.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	10.2	0.0	1.1	17.7	0.0				7.1	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h	0	1375		530	1265	0				274	0	
V/C Ratio(X)	0.00	0.44		0.14	0.51	0.00				0.72	0.00	
Avail Cap(c_a), veh/h	0	1375		627	1265	0				531	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.78	0.78	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.8	0.0	5.7	10.2	0.0				28.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.0	0.0	0.1	1.2	0.0				3.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	4.1	0.0	0.5	11.3	0.0				5.9	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	9.8	0.0	5.8	11.4	0.0				32.0	0.0	6.0
LnGrp LOS	A	A		A	B	A				C	A	A
Approach Vol, veh/h		611	A		725						349	A
Approach Delay, s/veh		9.8			10.8						20.7	
Approach LOS		A			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.6	45.1		15.3		54.7
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	25.0		19.0		38.5
Max Q Clear Time (g_c+I1), s	3.1	12.2		9.1		19.7
Green Ext Time (p_c), s	0.0	0.5		0.4		0.4

Intersection Summary		
HCM 6th Ctrl Delay		12.5
HCM 6th LOS		B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	545	0	0	447	211	210	1	43	0	0	0
Future Volume (veh/h)	190	545	0	0	447	211	210	1	43	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1800	0	0	1800	1800	1837	1911	1837			
Adj Flow Rate, veh/h	202	580	0	0	476	0	223	1	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	1	0	0	0	0	0	0	0	0			
Cap, veh/h	575	1249	0	0	958		296	1				
Arrive On Green	0.06	0.46	0.00	0.00	0.53	0.00	0.16	0.16	0.00			
Sat Flow, veh/h	1701	1800	0	0	1800	1525	1812	8	0			
Grp Volume(v), veh/h	202	580	0	0	476	0	224	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1800	0	0	1800	1525	1820	0	0			
Q Serve(g_s), s	3.3	15.4	0.0	0.0	11.8	0.0	8.2	0.0	0.0			
Cycle Q Clear(g_c), s	3.3	15.4	0.0	0.0	11.8	0.0	8.2	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	575	1249	0	0	958		297	0				
V/C Ratio(X)	0.35	0.46	0.00	0.00	0.50		0.75	0.00				
Avail Cap(c_a), veh/h	641	1249	0	0	958		442	0				
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.81	0.81	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	6.8	9.9	0.0	0.0	10.4	0.0	27.9	0.0	0.0			
Incr Delay (d2), s/veh	0.3	1.0	0.0	0.0	1.8	0.0	4.0	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	1.5	10.2	0.0	0.0	7.6	0.0	6.7	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	7.1	10.9	0.0	0.0	12.3	0.0	32.0	0.0	6.0			
LnGrp LOS	A	B	A	A	B		C	A	A			
Approach Vol, veh/h		782			476	A		270	A			
Approach Delay, s/veh		9.9			12.3			27.5				
Approach LOS		A			B			C				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		53.6		16.4	11.3	42.3			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		42.0		16.0	8.0	28.0			
Max Q Clear Time (g_c+I1), s		17.4		10.2	5.3	13.8			
Green Ext Time (p_c), s		0.3		0.4	0.2	0.2			

Intersection Summary		
HCM 6th Ctrl Delay	13.8	
HCM 6th LOS	B	

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	6.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	234	33	210	107	37	235
Future Vol, veh/h	234	33	210	107	37	235
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	260	37	233	119	41	261

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	636	293	0	0	352	0
Stage 1	293	-	-	-	-	-
Stage 2	343	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.3	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	497	792	-	-	909	-
Stage 1	803	-	-	-	-	-
Stage 2	823	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	475	792	-	-	909	-
Mov Cap-2 Maneuver	475	-	-	-	-	-
Stage 1	803	-	-	-	-	-
Stage 2	786	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20	0	1.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	475	792	909	-
HCM Lane V/C Ratio	-	-	0.547	0.046	0.045	-
HCM Control Delay (s)	-	-	21.4	9.8	9.1	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	3.2	0.1	0.1	-

Intersection	
Int Delay, s/veh	3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	21	72	325	0	156	228
Future Vol, veh/h	21	72	325	0	156	228
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-4	-	-	4
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	23	80	361	0	173	253

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	960	361	0	0	361	0
Stage 1	361	-	-	-	-	-
Stage 2	599	-	-	-	-	-
Critical Hdwy	6.22	6.12	-	-	4.3	-
Critical Hdwy Stg 1	6.2	-	-	-	-	-
Critical Hdwy Stg 2	5.22	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	332	731	-	-	903	-
Stage 1	746	-	-	-	-	-
Stage 2	640	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	268	731	-	-	903	-
Mov Cap-2 Maneuver	268	-	-	-	-	-
Stage 1	746	-	-	-	-	-
Stage 2	517	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.6	0	4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	268	731	903	-
HCM Lane V/C Ratio	-	-	0.087	0.109	0.192	-
HCM Control Delay (s)	-	-	19.7	10.5	9.9	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.4	0.7	-

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	73	252	23	0	249
Future Vol, veh/h	0	73	252	23	0	249
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	1	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	2	2	0	3
Mvmt Flow	0	81	280	26	0	277

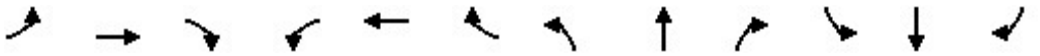
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	293	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.32	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	786	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	786	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	786	-
HCM Lane V/C Ratio	-	-	0.103	-
HCM Control Delay (s)	-	-	10.1	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.3	-

2027 Horizon Year No Build Scenario
Saturday Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	312	48	84	347	124	59	64	123	120	87	36
Future Volume (vph)	29	312	48	84	347	124	59	64	123	120	87	36
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		0	200		185	175		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	50			75			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.980				0.850		0.901			0.956	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	1739	0	1620	1764	1499	1604	1630	0	1645	1769	0
Flt Permitted	0.514			0.409			0.673			0.388		
Satd. Flow (perm)	912	1739	0	697	1764	1499	1136	1630	0	672	1769	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13				202		104			22	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			569			553			571	
Travel Time (s)		14.1			9.7			15.1			11.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	31	332	51	89	369	132	63	68	131	128	93	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	31	383	0	89	369	132	63	199	0	128	131	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	34	34		34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40		40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												

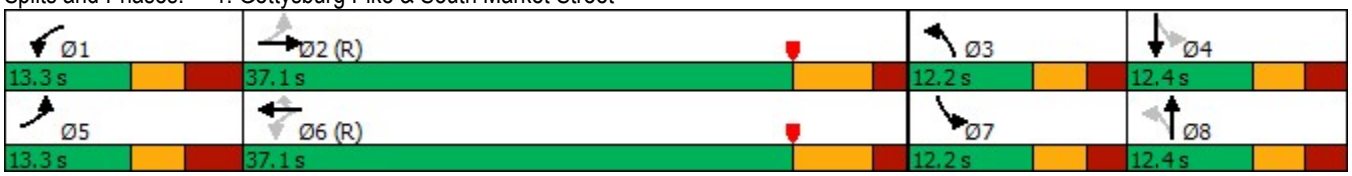


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0		3.0	10.0	10.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	10.6	39.6		9.6	16.6	16.6	10.5	9.5		9.5	9.5	
Total Split (s)	13.3	37.1		13.3	37.1	37.1	12.2	12.4		12.2	12.4	
Total Split (%)	17.7%	49.5%		17.7%	49.5%	49.5%	16.3%	16.5%		16.3%	16.5%	
Maximum Green (s)	7.0	30.7		7.0	30.7	30.7	7.0	7.0		7.0	7.0	
Yellow Time (s)	3.0	4.4		3.0	4.4	4.4	3.0	3.0		3.0	3.0	
All-Red Time (s)	3.3	2.0		3.3	2.0	2.0	2.2	2.4		2.2	2.4	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	5.3	5.4		5.3	5.4	5.4	4.2	4.4		4.2	4.4	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0		3.0	6.0	6.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0		0.0	25.0	25.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0		0.0	13.0	13.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		26.0			26.0	26.0		17.0			17.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	43.0	37.0		45.7	42.4	42.4	14.4	7.8		15.3	10.3	
Actuated g/C Ratio	0.57	0.49		0.61	0.57	0.57	0.19	0.10		0.20	0.14	
v/c Ratio	0.05	0.44		0.17	0.37	0.14	0.24	0.76		0.53	0.50	
Control Delay	6.6	16.3		4.0	7.3	1.0	23.4	36.5		31.2	33.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	6.6	16.3		4.0	7.3	1.0	23.4	36.5		31.2	33.8	
LOS	A	B		A	A	A	C	D		C	C	
Approach Delay		15.6			5.4			33.3			32.5	
Approach LOS		B			A			C			C	
Queue Length 50th (ft)	4	98		5	23	0	18	34		38	39	
Queue Length 95th (ft)	12	160		m12	118	m9	41	#113		73	#96	
Internal Link Dist (ft)		747			489			473			491	
Turn Bay Length (ft)	175			200		185	175			150		
Base Capacity (vph)	612	865		522	996	935	270	266		241	265	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.05	0.44		0.17	0.37	0.14	0.23	0.75		0.53	0.49	

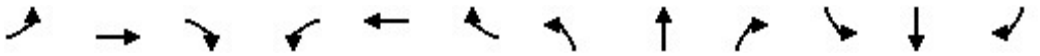
Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 6 (8%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 17.6		Intersection LOS: B	
Intersection Capacity Utilization 59.9%		ICU Level of Service B	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	478	48	69	505	0	0	0	0	183	2	74
Future Volume (vph)	0	478	48	69	505	0	0	0	0	183	2	74
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	90		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.961	
Flt Protected				0.950							0.966	
Satd. Flow (prot)	0	1782	1530	1653	1800	0	0	0	0	0	1783	0
Flt Permitted				0.291							0.966	
Satd. Flow (perm)	0	1782	1530	506	1800	0	0	0	0	0	1783	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			138								26	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		569			608			453			537	
Travel Time (s)		9.7			10.4			10.3			12.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	1%	0%	1%
Adj. Flow (vph)	0	525	53	76	555	0	0	0	0	201	2	81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	525	53	76	555	0	0	0	0	0	284	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												

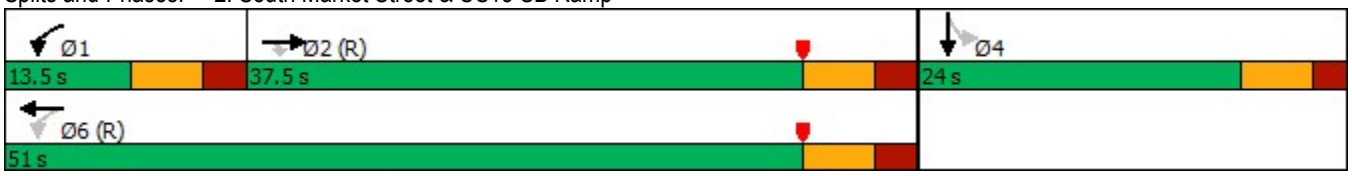


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		37.5	37.5	13.5	51.0					24.0	24.0	
Total Split (%)		50.0%	50.0%	18.0%	68.0%					32.0%	32.0%	
Maximum Green (s)		31.0	31.0	7.0	44.5					18.0	18.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		37.7	37.7	48.3	48.3						16.2	
Actuated g/C Ratio		0.50	0.50	0.64	0.64						0.22	
v/c Ratio		0.59	0.06	0.17	0.48						0.70	
Control Delay		15.1	0.6	4.7	7.2						34.1	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		15.1	0.6	4.7	7.2						34.1	
LOS		B	A	A	A						C	
Approach Delay		13.7			6.9						34.1	
Approach LOS		B			A						C	
Queue Length 50th (ft)		114	0	5	86						87	
Queue Length 95th (ft)		m177	m1	10	114						146	
Internal Link Dist (ft)		489			528			373			457	
Turn Bay Length (ft)			125	90								
Base Capacity (vph)		895	837	448	1160						471	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.59	0.06	0.17	0.48						0.60	

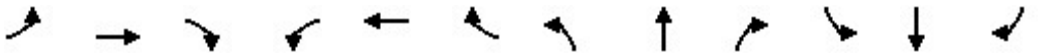
Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 14.7		Intersection LOS: B	
Intersection Capacity Utilization 59.5%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US15 SB Ramp



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	131	533	0	0	429	219	144	1	44	0	0	0
Future Volume (vph)	131	533	0	0	429	219	144	1	44	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.968				
Flt Protected	0.950							0.963				
Satd. Flow (prot)	1676	1740	0	0	1800	1479	0	1799	0	0	0	0
Flt Permitted	0.368							0.963				
Satd. Flow (perm)	649	1740	0	0	1800	1479	0	1799	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						233		19				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	139	567	0	0	456	233	153	1	47	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	139	567	0	0	456	233	0	201	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												

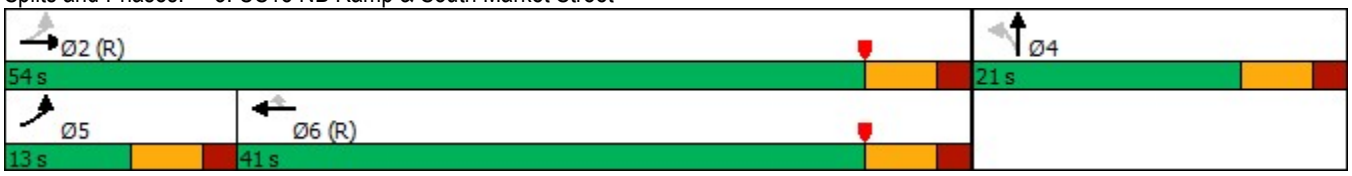


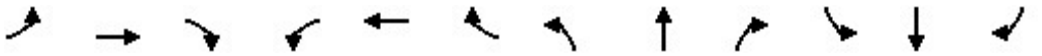
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	13.0	54.0			41.0	41.0	21.0	21.0				
Total Split (%)	17.3%	72.0%			54.7%	54.7%	28.0%	28.0%				
Maximum Green (s)	7.0	48.0			35.0	35.0	15.0	15.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	51.6	51.6			41.2	41.2		13.4				
Actuated g/C Ratio	0.69	0.69			0.55	0.55		0.18				
v/c Ratio	0.25	0.47			0.46	0.25		0.60				
Control Delay	5.3	7.6			13.9	2.5		32.9				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	5.3	7.6			13.9	2.5		32.9				
LOS	A	A			B	A		C				
Approach Delay		7.2			10.0			32.9				
Approach LOS		A			B			C				
Queue Length 50th (ft)	11	103			105	0		62				
Queue Length 95th (ft)	m23	153			177	27		110				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	556	1197			990	918		398				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.25	0.47			0.46	0.25		0.51				

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 2 (3%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 11.6		Intersection LOS: B	
Intersection Capacity Utilization 59.5%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: US15 NB Ramp & South Market Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	312	48	84	347	124	59	64	123	120	87	36
Future Volume (veh/h)	29	312	48	84	347	124	59	64	123	120	87	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1949	1949	1711	1711	1711	1837	1837	1837	1794	1866	1794
Adj Flow Rate, veh/h	31	332	37	89	369	68	63	68	79	128	93	23
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	659	827	92	540	866	734	312	83	96	288	214	53
Arrive On Green	0.03	0.48	0.48	0.12	1.00	1.00	0.06	0.11	0.11	0.10	0.15	0.15
Sat Flow, veh/h	1856	1723	192	1629	1711	1450	1750	775	900	1709	1445	357
Grp Volume(v), veh/h	31	0	369	89	369	68	63	0	147	128	0	116
Grp Sat Flow(s),veh/h/ln	1856	0	1914	1629	1711	1450	1750	0	1675	1709	0	1802
Q Serve(g_s), s	0.6	0.0	9.3	2.0	0.0	0.0	2.3	0.0	6.4	4.8	0.0	4.4
Cycle Q Clear(g_c), s	0.6	0.0	9.3	2.0	0.0	0.0	2.3	0.0	6.4	4.8	0.0	4.4
Prop In Lane	1.00		0.10	1.00		1.00	1.00		0.54	1.00		0.20
Lane Grp Cap(c), veh/h	659	0	919	540	866	734	312	0	179	288	0	267
V/C Ratio(X)	0.05	0.00	0.40	0.16	0.43	0.09	0.20	0.00	0.82	0.44	0.00	0.43
Avail Cap(c_a), veh/h	796	0	919	618	866	734	401	0	179	304	0	267
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.87	0.87	0.87	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.1	0.0	12.6	8.5	0.0	0.0	27.3	0.0	32.8	25.3	0.0	29.1
Incr Delay (d2), s/veh	0.0	0.0	1.3	0.1	1.3	0.2	0.3	0.0	25.6	1.1	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.0	6.8	1.0	0.6	0.1	1.8	0.0	6.9	3.4	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.1	0.0	13.9	8.6	1.3	0.2	27.6	0.0	58.4	26.4	0.0	30.2
LnGrp LOS	A	A	B	A	A	A	C	A	E	C	A	C
Approach Vol, veh/h		400			526			210			244	
Approach Delay, s/veh		13.5			2.4			49.1			28.2	
Approach LOS		B			A			D			C	

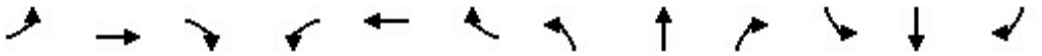
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	41.4	8.4	15.5	7.7	43.4	11.5	12.4
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 7	30.7	* 7	7.0	* 7	30.7	* 7	7.0
Max Q Clear Time (g_c+I1), s	4.0	11.3	4.3	6.4	2.6	2.0	6.8	8.4
Green Ext Time (p_c), s	0.0	3.5	0.0	0.0	0.0	4.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



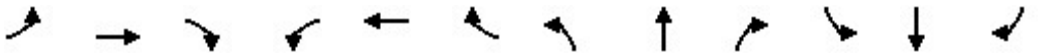
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	478	48	69	505	0	0	0	0	183	2	74
Future Volume (veh/h)	0	478	48	69	505	0	0	0	0	183	2	74
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1800	0				1860	1950	1860
Adj Flow Rate, veh/h	0	525	0	76	555	0				201	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	1	0	0	0	0				1	0	1
Cap, veh/h	0	1041		556	1282	0				272	3	
Arrive On Green	0.00	0.58	0.00	0.11	1.00	0.00				0.15	0.15	0.00
Sat Flow, veh/h	0	1786	1525	1714	1800	0				1839	18	0
Grp Volume(v), veh/h	0	525	0	76	555	0				203	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1800	0				1858	0	0
Q Serve(g_s), s	0.0	13.0	0.0	1.1	0.0	0.0				7.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	13.0	0.0	1.1	0.0	0.0				7.8	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h	0	1041		556	1282	0				275	0	
V/C Ratio(X)	0.00	0.50		0.14	0.43	0.00				0.74	0.00	
Avail Cap(c_a), veh/h	0	1041		644	1282	0				471	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.88	0.00	0.89	0.89	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	9.2	0.0	5.7	0.0	0.0				30.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.5	0.0	0.1	1.0	0.0				3.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	7.6	0.0	0.5	0.6	0.0				6.6	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	10.8	0.0	5.8	1.0	0.0				34.4	0.0	6.0
LnGrp LOS	A	B		A	A	A				C	A	A
Approach Vol, veh/h		525	A		631						284	A
Approach Delay, s/veh		10.8			1.5						26.3	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.7	49.2		16.1		58.9
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	31.0		18.0		44.5
Max Q Clear Time (g_c+I1), s	3.1	15.0		9.8		2.0
Green Ext Time (p_c), s	0.0	0.3		0.4		0.3

Intersection Summary	
HCM 6th Ctrl Delay	9.8
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	533	0	0	429	219	144	1	44	0	0	0
Future Volume (veh/h)	131	533	0	0	429	219	144	1	44	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1772	1800	0	0	1800	1800	1837	1911	1837			
Adj Flow Rate, veh/h	139	567	0	0	456	0	153	1	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	2	0	0	0	0	0	0	0	0			
Cap, veh/h	659	1344	0	0	1107		217	1				
Arrive On Green	0.13	1.00	0.00	0.00	0.61	0.00	0.12	0.12	0.00			
Sat Flow, veh/h	1688	1800	0	0	1800	1525	1809	12	0			
Grp Volume(v), veh/h	139	567	0	0	456	0	154	0	0			
Grp Sat Flow(s),veh/h/ln	1688	1800	0	0	1800	1525	1820	0	0			
Q Serve(g_s), s	2.0	0.0	0.0	0.0	9.8	0.0	6.1	0.0	0.0			
Cycle Q Clear(g_c), s	2.0	0.0	0.0	0.0	9.8	0.0	6.1	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		0.00			
Lane Grp Cap(c), veh/h	659	1344	0	0	1107		218	0				
V/C Ratio(X)	0.21	0.42	0.00	0.00	0.41		0.70	0.00				
Avail Cap(c_a), veh/h	729	1344	0	0	1107		388	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.78	0.78	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	4.3	0.0	0.0	0.0	7.5	0.0	31.7	0.0	0.0			
Incr Delay (d2), s/veh	0.1	0.8	0.0	0.0	1.1	0.0	4.1	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	0.7	0.5	0.0	0.0	5.8	0.0	5.1	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	4.4	0.8	0.0	0.0	8.6	0.0	35.8	0.0	6.0			
LnGrp LOS	A	A	A	A	A		D	A	A			
Approach Vol, veh/h		706			456	A		201	A			
Approach Delay, s/veh		1.5			8.6			28.9				
Approach LOS		A			A			C				

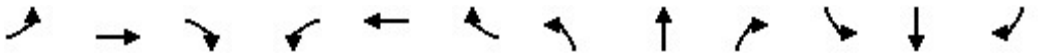
Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		61.0		14.0	9.9	51.1						
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0						
Max Green Setting (Gmax), s		48.0		15.0	7.0	35.0						
Max Q Clear Time (g_c+I1), s		2.0		8.1	4.0	11.8						
Green Ext Time (p_c), s		0.3		0.2	0.1	0.2						

Intersection Summary												
HCM 6th Ctrl Delay			7.9									
HCM 6th LOS			A									

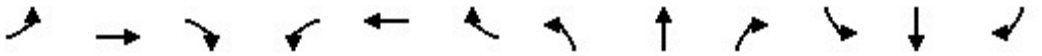
Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

2027 Horizon Year No Build Scenario With Adjacent Development Saturday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	312	48	84	347	124	59	64	123	120	87	36
Future Volume (vph)	29	312	48	84	347	124	59	64	123	120	87	36
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		225	200		185	175		0	150		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	50			75			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.901			0.956	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	1775	1509	1620	1764	1499	1604	1630	0	1645	1769	0
Flt Permitted	0.506			0.447			0.673			0.385		
Satd. Flow (perm)	898	1775	1509	762	1764	1499	1136	1630	0	667	1769	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			121			132		104			22	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			569			553			571	
Travel Time (s)		14.1			9.7			15.1			11.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	31	332	51	89	369	132	63	68	131	128	93	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	31	332	51	89	369	132	63	199	0	128	131	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	34	34	20	34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6	0	-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6	0	-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40	20	40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	3	1	6	7	3	8		7	4	
Switch Phase												

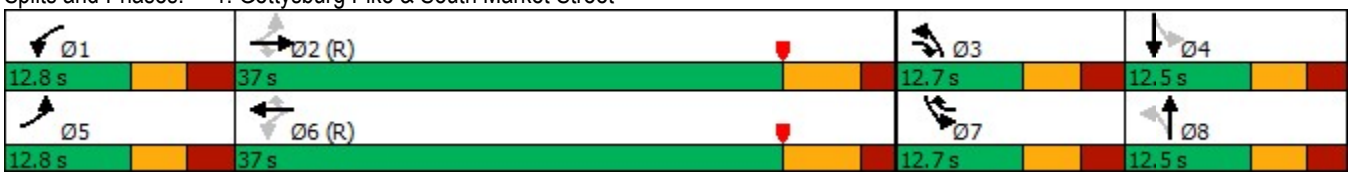


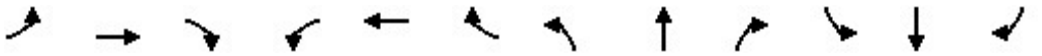
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0	3.0	3.0	10.0	3.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	10.6	39.6	10.5	9.6	16.6	9.5	10.5	9.5		9.5	9.5	
Total Split (s)	12.8	37.0	12.7	12.8	37.0	12.7	12.7	12.5		12.7	12.5	
Total Split (%)	17.1%	49.3%	16.9%	17.1%	49.3%	16.9%	16.9%	16.7%		16.9%	16.7%	
Maximum Green (s)	7.0	30.6	7.0	7.0	30.6	7.0	7.0	7.0		7.0	7.0	
Yellow Time (s)	3.2	4.4	3.2	3.2	4.4	3.2	3.2	3.2		3.2	3.2	
All-Red Time (s)	2.6	2.0	2.5	2.6	2.0	2.5	2.5	2.3		2.5	2.3	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.8	5.4	4.7	4.8	5.4	4.7	4.7	4.5		4.7	4.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0	3.0	3.0	6.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0	0.0	0.0	13.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max	None	None	C-Max	None	None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			22.0			22.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	40.9	34.4	47.5	43.4	39.6	52.9	15.3	7.8		16.6	10.4	
Actuated g/C Ratio	0.55	0.46	0.63	0.58	0.53	0.71	0.20	0.10		0.22	0.14	
v/c Ratio	0.05	0.41	0.05	0.17	0.40	0.12	0.23	0.76		0.51	0.50	
Control Delay	6.6	16.6	0.1	3.5	8.5	1.9	23.1	36.5		29.7	34.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	6.6	16.6	0.1	3.5	8.5	1.9	23.1	36.5		29.7	34.6	
LOS	A	B	A	A	A	A	C	D		C	C	
Approach Delay		13.8			6.3			33.3			32.1	
Approach LOS		B			A			C			C	
Queue Length 50th (ft)	4	85	0	4	20	0	18	34		37	39	
Queue Length 95th (ft)	12	139	0	m9	106	m17	41	#113		72	#96	
Internal Link Dist (ft)		747			489			473			491	
Turn Bay Length (ft)	175		225	200		185	175			150		
Base Capacity (vph)	580	814	1006	532	930	1097	287	266		251	264	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.05	0.41	0.05	0.17	0.40	0.12	0.22	0.75		0.51	0.50	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 11 (15%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 17.4		Intersection LOS: B	
Intersection Capacity Utilization 57.3%		ICU Level of Service B	
Analysis Period (min) 15			

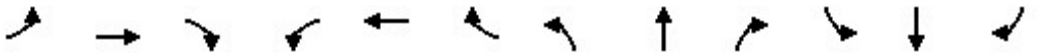
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	478	48	69	505	0	0	0	0	183	2	74
Future Volume (vph)	0	478	48	69	505	0	0	0	0	183	2	74
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	90		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.961	
Flt Protected				0.950							0.966	
Satd. Flow (prot)	0	1782	1530	1653	1800	0	0	0	0	0	1783	0
Flt Permitted				0.291							0.966	
Satd. Flow (perm)	0	1782	1530	506	1800	0	0	0	0	0	1783	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			138								26	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		569			608			453			537	
Travel Time (s)		9.7			10.4			10.3			12.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	1%	0%	1%
Adj. Flow (vph)	0	525	53	76	555	0	0	0	0	201	2	81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	525	53	76	555	0	0	0	0	0	284	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												

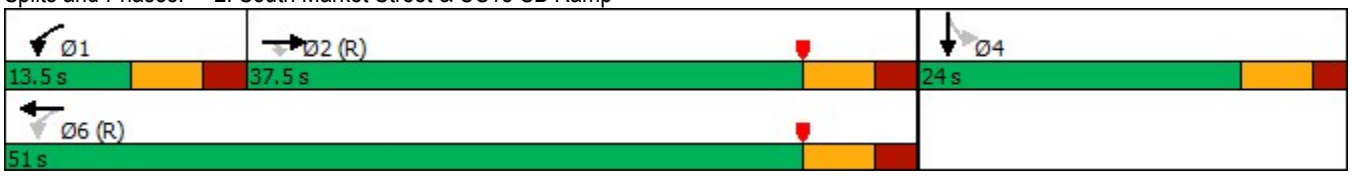


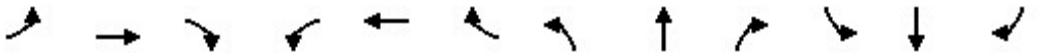
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		37.5	37.5	13.5	51.0					24.0	24.0	
Total Split (%)		50.0%	50.0%	18.0%	68.0%					32.0%	32.0%	
Maximum Green (s)		31.0	31.0	7.0	44.5					18.0	18.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		37.7	37.7	48.3	48.3						16.2	
Actuated g/C Ratio		0.50	0.50	0.64	0.64						0.22	
v/c Ratio		0.59	0.06	0.17	0.48						0.70	
Control Delay		15.9	0.6	4.7	7.2						34.1	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		15.9	0.6	4.7	7.2						34.1	
LOS		B	A	A	A						C	
Approach Delay		14.5			6.9						34.1	
Approach LOS		B			A						C	
Queue Length 50th (ft)		121	0	5	86						87	
Queue Length 95th (ft)		m202	m0	10	114						146	
Internal Link Dist (ft)		489			528			373			457	
Turn Bay Length (ft)			125	90								
Base Capacity (vph)		895	837	448	1160						471	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.59	0.06	0.17	0.48						0.60	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 15.0		Intersection LOS: B	
Intersection Capacity Utilization 59.5%		ICU Level of Service B	
Analysis Period (min) 15			

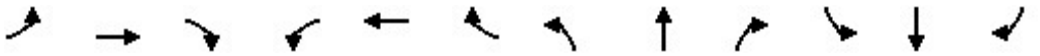
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US15 SB Ramp





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	131	533	0	0	429	219	144	1	44	0	0	0
Future Volume (vph)	131	533	0	0	429	219	144	1	44	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.968				
Flt Protected	0.950							0.963				
Satd. Flow (prot)	1676	1740	0	0	1800	1479	0	1799	0	0	0	0
Flt Permitted	0.368							0.963				
Satd. Flow (perm)	649	1740	0	0	1800	1479	0	1799	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						233		19				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	139	567	0	0	456	233	153	1	47	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	139	567	0	0	456	233	0	201	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												

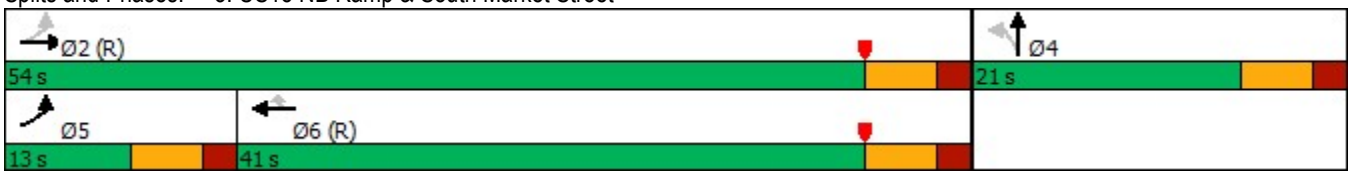


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	13.0	54.0			41.0	41.0	21.0	21.0				
Total Split (%)	17.3%	72.0%			54.7%	54.7%	28.0%	28.0%				
Maximum Green (s)	7.0	48.0			35.0	35.0	15.0	15.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	51.6	51.6			41.2	41.2		13.4				
Actuated g/C Ratio	0.69	0.69			0.55	0.55		0.18				
v/c Ratio	0.25	0.47			0.46	0.25		0.60				
Control Delay	6.7	9.1			13.9	2.5		32.9				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	6.7	9.1			13.9	2.5		32.9				
LOS	A	A			B	A		C				
Approach Delay		8.6			10.0			32.9				
Approach LOS		A			B			C				
Queue Length 50th (ft)	18	126			105	0		62				
Queue Length 95th (ft)	m23	153			177	27		110				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	556	1197			990	918		398				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.25	0.47			0.46	0.25		0.51				

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 2 (3%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 12.3		Intersection LOS: B	
Intersection Capacity Utilization 59.5%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: US15 NB Ramp & South Market Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	312	48	84	347	124	59	64	123	120	87	36
Future Volume (veh/h)	29	312	48	84	347	124	59	64	123	120	87	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1949	1949	1711	1711	1711	1837	1837	1837	1794	1866	1794
Adj Flow Rate, veh/h	31	332	37	89	369	68	63	68	79	128	93	23
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	657	932	882	555	863	873	313	83	96	289	214	53
Arrive On Green	0.03	0.48	0.48	0.12	1.00	1.00	0.06	0.11	0.11	0.10	0.15	0.15
Sat Flow, veh/h	1856	1949	1652	1629	1711	1450	1750	775	900	1709	1445	357
Grp Volume(v), veh/h	31	332	37	89	369	68	63	0	147	128	0	116
Grp Sat Flow(s),veh/h/ln	1856	1949	1652	1629	1711	1450	1750	0	1675	1709	0	1802
Q Serve(g_s), s	0.6	8.0	0.8	2.0	0.0	0.0	2.3	0.0	6.4	4.8	0.0	4.4
Cycle Q Clear(g_c), s	0.6	8.0	0.8	2.0	0.0	0.0	2.3	0.0	6.4	4.8	0.0	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.54	1.00		0.20
Lane Grp Cap(c), veh/h	657	932	882	555	863	873	313	0	179	289	0	267
V/C Ratio(X)	0.05	0.36	0.04	0.16	0.43	0.08	0.20	0.00	0.82	0.44	0.00	0.43
Avail Cap(c_a), veh/h	795	932	882	633	863	873	402	0	179	304	0	267
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.87	0.87	0.87	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.1	12.3	8.3	8.4	0.0	0.0	27.3	0.0	32.8	25.6	0.0	29.1
Incr Delay (d2), s/veh	0.0	1.1	0.1	0.1	1.3	0.2	0.3	0.0	25.6	1.1	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	5.9	0.5	1.0	0.6	0.1	1.8	0.0	6.9	3.5	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.2	13.4	8.4	8.5	1.3	0.2	27.6	0.0	58.4	26.7	0.0	30.2
LnGrp LOS	A	B	A	A	A	A	C	A	E	C	A	C
Approach Vol, veh/h		400			526			210			244	
Approach Delay, s/veh		12.6			2.4			49.1			28.4	
Approach LOS		B			A			D			C	

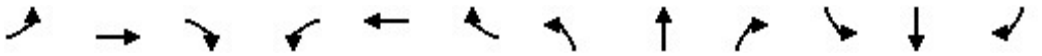
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	41.3	8.9	15.6	7.2	43.2	12.0	12.5
Change Period (Y+Rc), s	* 5.8	6.4	* 5.7	5.5	* 5.8	6.4	* 5.7	5.5
Max Green Setting (Gmax), s	* 7	30.6	* 7	7.0	* 7	30.6	* 7	7.0
Max Q Clear Time (g_c+I1), s	4.0	10.0	4.3	6.4	2.6	2.0	6.8	8.4
Green Ext Time (p_c), s	0.0	3.5	0.0	0.0	0.0	4.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.1
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



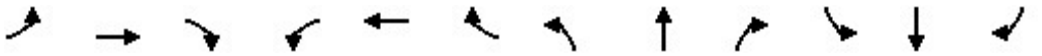
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	478	48	69	505	0	0	0	0	183	2	74
Future Volume (veh/h)	0	478	48	69	505	0	0	0	0	183	2	74
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1800	0				1860	1950	1860
Adj Flow Rate, veh/h	0	525	0	76	555	0				201	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	1	0	0	0	0				1	0	1
Cap, veh/h	0	1041		556	1282	0				272	3	
Arrive On Green	0.00	0.58	0.00	0.11	1.00	0.00				0.15	0.15	0.00
Sat Flow, veh/h	0	1786	1525	1714	1800	0				1839	18	0
Grp Volume(v), veh/h	0	525	0	76	555	0				203	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1800	0				1858	0	0
Q Serve(g_s), s	0.0	13.0	0.0	1.1	0.0	0.0				7.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	13.0	0.0	1.1	0.0	0.0				7.8	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h	0	1041		556	1282	0				275	0	
V/C Ratio(X)	0.00	0.50		0.14	0.43	0.00				0.74	0.00	
Avail Cap(c_a), veh/h	0	1041		644	1282	0				471	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.90	0.00	0.89	0.89	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	9.2	0.0	5.7	0.0	0.0				30.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.6	0.0	0.1	1.0	0.0				3.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	7.7	0.0	0.5	0.6	0.0				6.6	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	10.8	0.0	5.8	1.0	0.0				34.4	0.0	6.0
LnGrp LOS	A	B		A	A	A				C	A	A
Approach Vol, veh/h		525	A		631						284	A
Approach Delay, s/veh		10.8			1.5						26.3	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.7	49.2		16.1		58.9
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	31.0		18.0		44.5
Max Q Clear Time (g_c+I1), s	3.1	15.0		9.8		2.0
Green Ext Time (p_c), s	0.0	0.3		0.4		0.3

Intersection Summary	
HCM 6th Ctrl Delay	9.8
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	533	0	0	429	219	144	1	44	0	0	0
Future Volume (veh/h)	131	533	0	0	429	219	144	1	44	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1772	1800	0	0	1800	1800	1837	1911	1837			
Adj Flow Rate, veh/h	139	567	0	0	456	0	153	1	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	2	0	0	0	0	0	0	0	0			
Cap, veh/h	659	1344	0	0	1107		217	1				
Arrive On Green	0.13	1.00	0.00	0.00	0.61	0.00	0.12	0.12	0.00			
Sat Flow, veh/h	1688	1800	0	0	1800	1525	1809	12	0			
Grp Volume(v), veh/h	139	567	0	0	456	0	154	0	0			
Grp Sat Flow(s),veh/h/ln	1688	1800	0	0	1800	1525	1820	0	0			
Q Serve(g_s), s	2.0	0.0	0.0	0.0	9.8	0.0	6.1	0.0	0.0			
Cycle Q Clear(g_c), s	2.0	0.0	0.0	0.0	9.8	0.0	6.1	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		0.00			
Lane Grp Cap(c), veh/h	659	1344	0	0	1107		218	0				
V/C Ratio(X)	0.21	0.42	0.00	0.00	0.41		0.70	0.00				
Avail Cap(c_a), veh/h	729	1344	0	0	1107		388	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.78	0.78	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	4.3	0.0	0.0	0.0	7.5	0.0	31.7	0.0	0.0			
Incr Delay (d2), s/veh	0.1	0.8	0.0	0.0	1.1	0.0	4.1	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	0.7	0.5	0.0	0.0	5.8	0.0	5.1	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	4.4	0.8	0.0	0.0	8.6	0.0	35.8	0.0	6.0			
LnGrp LOS	A	A	A	A	A		D	A	A			
Approach Vol, veh/h		706			456	A		201	A			
Approach Delay, s/veh		1.5			8.6			28.9				
Approach LOS		A			A			C				

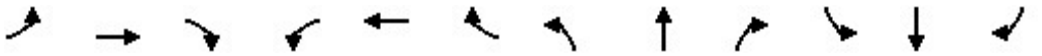
Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		61.0		14.0	9.9	51.1						
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0						
Max Green Setting (Gmax), s		48.0		15.0	7.0	35.0						
Max Q Clear Time (g_c+I1), s		2.0		8.1	4.0	11.8						
Green Ext Time (p_c), s		0.3		0.2	0.1	0.2						

Intersection Summary												
HCM 6th Ctrl Delay			7.9									
HCM 6th LOS			A									

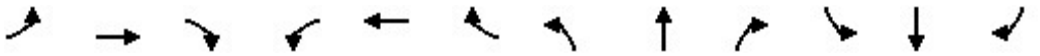
Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

2027 Horizon Year Build Scenario
Saturday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	263	86	180	297	124	99	99	209	240	125	113
Future Volume (vph)	101	263	86	180	297	124	99	99	209	240	125	113
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		0	200		185	175		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	50			75			100			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.963				0.850		0.898			0.929	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	1709	0	1620	1764	1499	1604	1624	0	1645	1719	0
Flt Permitted	0.482			0.371			0.590			0.190		
Satd. Flow (perm)	855	1709	0	633	1764	1499	996	1624	0	329	1719	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21				168		104			47	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			370			468			336	
Travel Time (s)		14.1			6.3			12.8			6.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	107	280	91	191	316	132	105	105	222	255	133	120
Shared Lane Traffic (%)												
Lane Group Flow (vph)	107	371	0	191	316	132	105	327	0	255	253	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	34	34		34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6		-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40		40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												



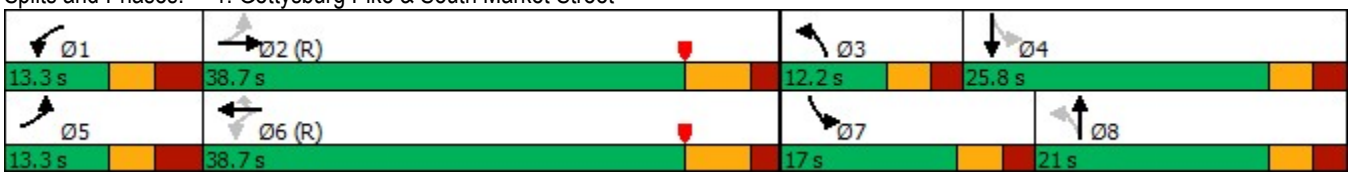
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0		3.0	10.0	10.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	10.6	39.6		9.6	16.6	16.6	10.5	9.5		9.5	9.5	
Total Split (s)	13.3	38.7		13.3	38.7	38.7	12.2	21.0		17.0	25.8	
Total Split (%)	14.8%	43.0%		14.8%	43.0%	43.0%	13.6%	23.3%		18.9%	28.7%	
Maximum Green (s)	7.0	32.3		7.0	32.3	32.3	7.0	15.6		11.8	20.4	
Yellow Time (s)	3.0	4.4		3.0	4.4	4.4	3.0	3.0		3.0	3.0	
All-Red Time (s)	3.3	2.0		3.3	2.0	2.0	2.2	2.4		2.2	2.4	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	5.3	5.4		5.3	5.4	5.4	4.2	4.4		4.2	4.4	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0		3.0	6.0	6.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0		0.0	25.0	25.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0		0.0	13.0	13.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		26.0			26.0	26.0		17.0			17.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	42.0	34.1		43.2	36.7	36.7	23.9	15.8		33.0	23.1	
Actuated g/C Ratio	0.47	0.38		0.48	0.41	0.41	0.27	0.18		0.37	0.26	
v/c Ratio	0.23	0.56		0.49	0.44	0.19	0.33	0.88		0.83	0.53	
Control Delay	12.6	25.1		11.2	17.0	2.3	22.6	50.4		45.6	28.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	12.6	25.1		11.2	17.0	2.3	22.6	50.4		45.6	28.8	
LOS	B	C		B	B	A	C	D		D	C	
Approach Delay		22.3			12.2			43.7			37.3	
Approach LOS		C			B			D			D	
Queue Length 50th (ft)	24	125		27	91	7	31	100		84	82	
Queue Length 95th (ft)	45	198		m48	m140	m17	60	#219		#177	145	
Internal Link Dist (ft)		747			290			388			256	
Turn Bay Length (ft)	175			200		185	175			150		
Base Capacity (vph)	474	660		391	719	711	319	384		307	475	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.23	0.56		0.49	0.44	0.19	0.33	0.85		0.83	0.53	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 6 (7%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 27.4		Intersection LOS: C	
Intersection Capacity Utilization 79.8%		ICU Level of Service D	
Analysis Period (min) 15			

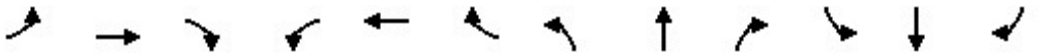
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	573	110	69	610	0	0	0	0	183	2	141
Future Volume (vph)	0	573	110	69	610	0	0	0	0	183	2	141
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	100		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.942	
Flt Protected				0.950							0.973	
Satd. Flow (prot)	0	1782	1530	1653	1800	0	0	0	0	0	1760	0
Flt Permitted				0.233							0.973	
Satd. Flow (perm)	0	1782	1530	405	1800	0	0	0	0	0	1760	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			115								42	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		199			608			453			537	
Travel Time (s)		3.4			10.4			10.3			12.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	1%	0%	1%
Adj. Flow (vph)	0	630	121	76	670	0	0	0	0	201	2	155
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	630	121	76	670	0	0	0	0	0	358	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												

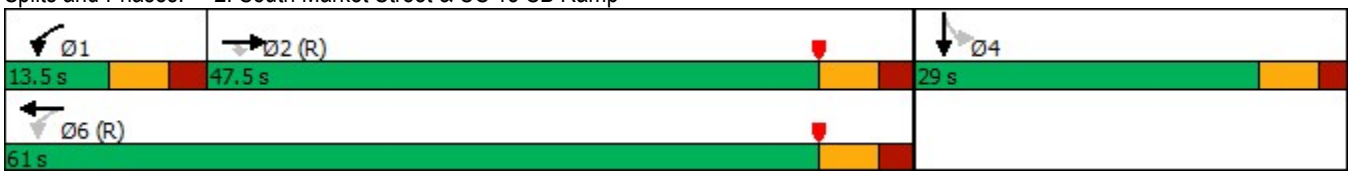


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		47.5	47.5	13.5	61.0					29.0	29.0	
Total Split (%)		52.8%	52.8%	15.0%	67.8%					32.2%	32.2%	
Maximum Green (s)		41.0	41.0	7.0	54.5					23.0	23.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		47.7	47.7	58.4	58.4						21.1	
Actuated g/C Ratio		0.53	0.53	0.65	0.65						0.23	
v/c Ratio		0.67	0.14	0.21	0.57						0.81	
Control Delay		19.8	4.2	5.8	10.0						42.9	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		19.8	4.2	5.8	10.0						42.9	
LOS		B	A	A	A						D	
Approach Delay		17.3			9.5						42.9	
Approach LOS		B			A						D	
Queue Length 50th (ft)		217	4	6	146						133	
Queue Length 95th (ft)		m301	m9	m12	185						211	
Internal Link Dist (ft)		119			528			373			457	
Turn Bay Length (ft)			125	100								
Base Capacity (vph)		945	865	373	1168						500	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.67	0.14	0.20	0.57						0.72	

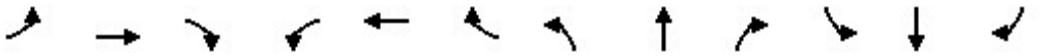
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 19.1		Intersection LOS: B	
Intersection Capacity Utilization 69.1%		ICU Level of Service C	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US 15 SB Ramp



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	564	0	0	463	219	215	1	44	0	0	0
Future Volume (vph)	195	564	0	0	463	219	215	1	44	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.977				
Flt Protected	0.950							0.960				
Satd. Flow (prot)	1693	1740	0	0	1800	1479	0	1810	0	0	0	0
Flt Permitted	0.330							0.960				
Satd. Flow (perm)	588	1740	0	0	1800	1479	0	1810	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						233		11				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	207	600	0	0	493	233	229	1	47	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	207	600	0	0	493	233	0	277	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												

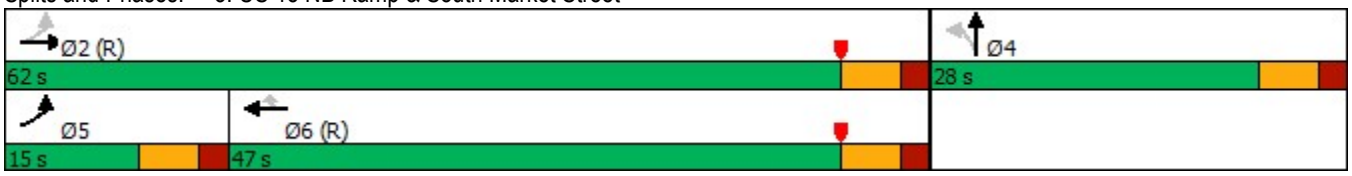


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	15.0	62.0			47.0	47.0	28.0	28.0				
Total Split (%)	16.7%	68.9%			52.2%	52.2%	31.1%	31.1%				
Maximum Green (s)	9.0	56.0			41.0	41.0	22.0	22.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	61.1	61.1			46.6	46.6		18.9				
Actuated g/C Ratio	0.68	0.68			0.52	0.52		0.21				
v/c Ratio	0.40	0.51			0.53	0.27		0.71				
Control Delay	7.3	8.2			18.1	2.8		41.8				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	7.3	8.2			18.1	2.8		41.8				
LOS	A	A			B	A		D				
Approach Delay		8.0			13.2			41.8				
Approach LOS		A			B			D				
Queue Length 50th (ft)	12	113			146	0		112				
Queue Length 95th (ft)	m36	159			239	30		172				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	521	1180			932	878		470				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.40	0.51			0.53	0.27		0.59				

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 4 (4%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 15.2		Intersection LOS: B	
Intersection Capacity Utilization 69.1%		ICU Level of Service C	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

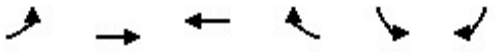
Splits and Phases: 3: US 15 NB Ramp & South Market Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	234	33	218	107	37	244
Future Volume (vph)	234	33	218	107	37	244
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		0%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.955			
Flt Protected	0.950					0.993
Satd. Flow (prot)	1770	1583	1779	0	0	1825
Flt Permitted	0.950					0.993
Satd. Flow (perm)	1770	1583	1779	0	0	1825
Link Speed (mph)	25		25			35
Link Distance (ft)	189		336			230
Travel Time (s)	5.2		9.2			4.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	260	37	242	119	41	271
Shared Lane Traffic (%)						
Lane Group Flow (vph)	260	37	361	0	0	312
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.8%		ICU Level of Service B	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	712	602	126	0	0
Future Volume (vph)	0	712	602	126	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	1900	1844	1552	0	0
Flt Permitted						
Satd. Flow (perm)	0	1900	1844	1552	0	0
Link Speed (mph)		30	40		25	
Link Distance (ft)		370	199		166	
Travel Time (s)		8.4	3.4		4.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	2%	0%	0%
Adj. Flow (vph)	0	791	669	140	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	791	669	140	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	40.8%	ICU Level of Service	A
Analysis Period (min)	15		



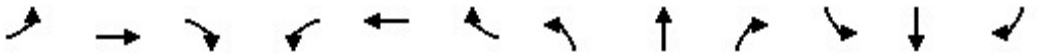
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	21	72	334	0	156	236
Future Volume (vph)	21	72	334	0	156	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-1%		-4%			4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950					0.981
Satd. Flow (prot)	1778	1591	1900	0	0	1780
Flt Permitted	0.950					0.981
Satd. Flow (perm)	1778	1591	1900	0	0	1780
Link Speed (mph)	25		25			25
Link Distance (ft)	288		455			468
Travel Time (s)	7.9		12.4			12.8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	23	80	371	0	173	262
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	80	371	0	0	435
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.97	0.97	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	73	261	23	0	257
Future Volume (vph)	0	73	261	23	0	257
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%		1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865	0.989			
Flt Protected						
Satd. Flow (prot)	0	1603	1833	0	0	1835
Flt Permitted						
Satd. Flow (perm)	0	1603	1833	0	0	1835
Link Speed (mph)	25		25			25
Link Distance (ft)	296		186			455
Travel Time (s)	8.1		5.1			12.4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	2%	2%	2%	0%	3%
Adj. Flow (vph)	0	81	290	26	0	286
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	81	316	0	0	286
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	26.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	263	86	180	297	124	99	99	209	240	125	113
Future Volume (veh/h)	101	263	86	180	297	124	99	99	209	240	125	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1949	1949	1711	1711	1711	1837	1837	1837	1794	1866	1794
Adj Flow Rate, veh/h	107	280	65	191	316	68	105	105	133	255	133	70
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	483	585	136	456	697	591	374	127	161	361	274	144
Arrive On Green	0.06	0.38	0.38	0.09	0.41	0.41	0.08	0.17	0.17	0.14	0.24	0.24
Sat Flow, veh/h	1856	1530	355	1629	1711	1450	1750	736	933	1709	1151	606
Grp Volume(v), veh/h	107	0	345	191	316	68	105	0	238	255	0	203
Grp Sat Flow(s),veh/h/ln	1856	0	1885	1629	1711	1450	1750	0	1669	1709	0	1757
Q Serve(g_s), s	3.0	0.0	12.5	6.3	12.1	2.6	4.3	0.0	12.4	10.5	0.0	9.0
Cycle Q Clear(g_c), s	3.0	0.0	12.5	6.3	12.1	2.6	4.3	0.0	12.4	10.5	0.0	9.0
Prop In Lane	1.00		0.19	1.00		1.00	1.00		0.56	1.00		0.34
Lane Grp Cap(c), veh/h	483	0	721	456	697	591	374	0	287	361	0	418
V/C Ratio(X)	0.22	0.00	0.48	0.42	0.45	0.12	0.28	0.00	0.83	0.71	0.00	0.49
Avail Cap(c_a), veh/h	529	0	721	456	697	591	396	0	308	361	0	418
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.3	0.0	21.0	15.3	19.4	16.6	27.1	0.0	36.0	24.7	0.0	29.5
Incr Delay (d2), s/veh	0.2	0.0	2.3	0.6	2.1	0.4	0.4	0.0	16.1	6.2	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.2	0.0	9.4	4.0	8.5	1.7	3.3	0.0	10.4	8.2	0.0	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.5	0.0	23.3	15.9	21.5	17.0	27.5	0.0	52.1	30.9	0.0	30.4
LnGrp LOS	B	A	C	B	C	B	C	A	D	C	A	C
Approach Vol, veh/h		452			575			343			458	
Approach Delay, s/veh		21.4			19.1			44.5			30.7	
Approach LOS		C			B			D			C	

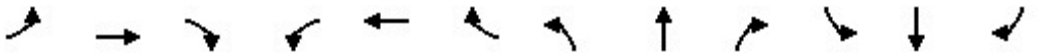
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	39.8	11.1	25.8	11.0	42.1	17.0	19.9
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 7	32.3	* 7	20.4	* 7	32.3	* 12	15.6
Max Q Clear Time (g_c+I1), s	8.3	14.5	6.3	11.0	5.0	14.1	12.5	14.4
Green Ext Time (p_c), s	0.0	3.2	0.0	0.4	0.0	3.5	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	27.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



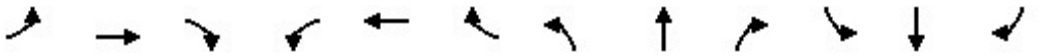
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	573	110	69	610	0	0	0	0	183	2	141
Future Volume (veh/h)	0	573	110	69	610	0	0	0	0	183	2	141
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1800	0				1860	1950	1860
Adj Flow Rate, veh/h	0	630	0	76	670	0				201	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	1	0	0	0	0				1	0	1
Cap, veh/h	0	1125		492	1332	0				263	3	
Arrive On Green	0.00	0.63	0.00	0.10	1.00	0.00				0.14	0.14	0.00
Sat Flow, veh/h	0	1786	1525	1714	1800	0				1839	18	0
Grp Volume(v), veh/h	0	630	0	76	670	0				203	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1800	0				1858	0	0
Q Serve(g_s), s	0.0	18.1	0.0	1.2	0.0	0.0				9.5	0.0	0.0
Cycle Q Clear(g_c), s	0.0	18.1	0.0	1.2	0.0	0.0				9.5	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h	0	1125		492	1332	0				266	0	
V/C Ratio(X)	0.00	0.56		0.15	0.50	0.00				0.76	0.00	
Avail Cap(c_a), veh/h	0	1125		561	1332	0				495	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.83	0.83	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	9.5	0.0	6.3	0.0	0.0				37.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.0	0.0	0.1	1.1	0.0				4.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	10.5	0.0	0.6	0.8	0.0				8.1	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	11.5	0.0	6.5	1.1	0.0				41.6	0.0	6.0
LnGrp LOS	A	B		A	A	A				D	A	A
Approach Vol, veh/h		630	A		746						358	A
Approach Delay, s/veh		11.5			1.7						26.2	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.9	62.2		17.9		72.1
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	41.0		23.0		54.5
Max Q Clear Time (g_c+I1), s	3.2	20.1		11.5		2.0
Green Ext Time (p_c), s	0.0	0.4		0.5		0.4

Intersection Summary	
HCM 6th Ctrl Delay	10.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	564	0	0	463	219	215	1	44	0	0	0
Future Volume (veh/h)	195	564	0	0	463	219	215	1	44	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1800	0	0	1800	1800	1837	1911	1837			
Adj Flow Rate, veh/h	207	600	0	0	493	0	229	1	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	1	0	0	0	0	0	0	0	0			
Cap, veh/h	596	1312	0	0	1069		290	1				
Arrive On Green	0.16	1.00	0.00	0.00	0.59	0.00	0.16	0.16	0.00			
Sat Flow, veh/h	1701	1800	0	0	1800	1525	1812	8	0			
Grp Volume(v), veh/h	207	600	0	0	493	0	230	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1800	0	0	1800	1525	1820	0	0			
Q Serve(g_s), s	4.0	0.0	0.0	0.0	13.8	0.0	10.9	0.0	0.0			
Cycle Q Clear(g_c), s	4.0	0.0	0.0	0.0	13.8	0.0	10.9	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	596	1312	0	0	1069		291	0				
V/C Ratio(X)	0.35	0.46	0.00	0.00	0.46		0.79	0.00				
Avail Cap(c_a), veh/h	649	1312	0	0	1069		465	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.69	0.69	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	6.0	0.0	0.0	0.0	10.2	0.0	36.4	0.0	0.0			
Incr Delay (d2), s/veh	0.2	0.8	0.0	0.0	1.4	0.0	4.8	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	1.7	0.5	0.0	0.0	8.7	0.0	8.9	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	6.2	0.8	0.0	0.0	11.7	0.0	41.1	0.0	6.0			
LnGrp LOS	A	A	A	A	B		D	A	A			
Approach Vol, veh/h		807			493	A		277	A			
Approach Delay, s/veh		2.2			11.7			35.2				
Approach LOS		A			B			D				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		70.6		19.4	12.2	58.4			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		56.0		22.0	9.0	41.0			
Max Q Clear Time (g_c+I1), s		2.0		12.9	6.0	15.8			
Green Ext Time (p_c), s		0.3		0.5	0.2	0.2			

Intersection Summary		
HCM 6th Ctrl Delay		10.9
HCM 6th LOS		B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	6.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	234	33	218	107	37	244
Future Vol, veh/h	234	33	218	107	37	244
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	260	37	242	119	41	271

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	655	302	0	0	361	0
Stage 1	302	-	-	-	-	-
Stage 2	353	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.3	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	484	783	-	-	903	-
Stage 1	793	-	-	-	-	-
Stage 2	814	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	458	783	-	-	903	-
Mov Cap-2 Maneuver	458	-	-	-	-	-
Stage 1	793	-	-	-	-	-
Stage 2	771	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.1	0	1.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	458	783	903	-
HCM Lane V/C Ratio	-	-	0.568	0.047	0.046	-
HCM Control Delay (s)	-	-	22.7	9.8	9.2	0
HCM Lane LOS	-	-	C	A	A	A
HCM 95th %tile Q(veh)	-	-	3.5	0.1	0.1	-

Intersection	
Int Delay, s/veh	3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	21	72	334	0	156	236
Future Vol, veh/h	21	72	334	0	156	236
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-4	-	-	4
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	23	80	371	0	173	262

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	979	371	0	0	371	0
Stage 1	371	-	-	-	-	-
Stage 2	608	-	-	-	-	-
Critical Hdwy	6.22	6.12	-	-	4.3	-
Critical Hdwy Stg 1	6.2	-	-	-	-	-
Critical Hdwy Stg 2	5.22	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	323	722	-	-	896	-
Stage 1	736	-	-	-	-	-
Stage 2	633	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	250	722	-	-	896	-
Mov Cap-2 Maneuver	250	-	-	-	-	-
Stage 1	736	-	-	-	-	-
Stage 2	490	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.9	0	4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	250	722	896	-
HCM Lane V/C Ratio	-	-	0.093	0.111	0.193	-
HCM Control Delay (s)	-	-	20.9	10.6	10	0
HCM Lane LOS	-	-	C	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.4	0.7	-

Intersection	
Int Delay, s/veh	1.2

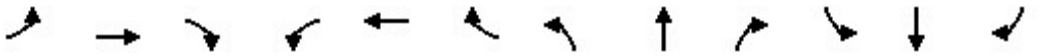
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	73	261	23	0	257
Future Vol, veh/h	0	73	261	23	0	257
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	1	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	2	2	0	3
Mvmt Flow	0	81	290	26	0	286

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	303	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.32	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	775	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	775	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

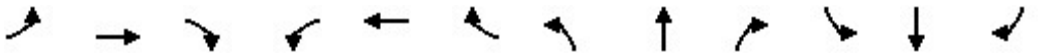
Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	775	-
HCM Lane V/C Ratio	-	-	0.105	-
HCM Control Delay (s)	-	-	10.2	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.3	-

2027 Horizon Year Build Scenario With Adjacent Development Saturday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	263	86	180	297	124	99	99	209	240	125	113
Future Volume (vph)	101	263	86	180	297	124	99	99	209	240	125	113
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		225	200		185	175		0	150		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	50			75			100			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.898			0.929	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	1775	1509	1620	1764	1499	1604	1624	0	1645	1719	0
Flt Permitted	0.485			0.480			0.518			0.189		
Satd. Flow (perm)	861	1775	1509	818	1764	1499	875	1624	0	327	1719	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			101			132		107			48	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			370			468			336	
Travel Time (s)		14.1			6.3			12.8			6.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	107	280	91	191	316	132	105	105	222	255	133	120
Shared Lane Traffic (%)												
Lane Group Flow (vph)	107	280	91	191	316	132	105	327	0	255	253	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1		1	1	
Detector Template			Right									
Leading Detector (ft)	34	34	20	34	34	34	39	39		34	34	
Trailing Detector (ft)	-6	-6	0	-6	-6	-6	-6	-6		-6	-6	
Detector 1 Position(ft)	-6	-6	0	-6	-6	-6	-6	-6		-6	-6	
Detector 1 Size(ft)	40	40	20	40	40	40	45	45		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	3	1	6	7	3	8		7	4	
Switch Phase												

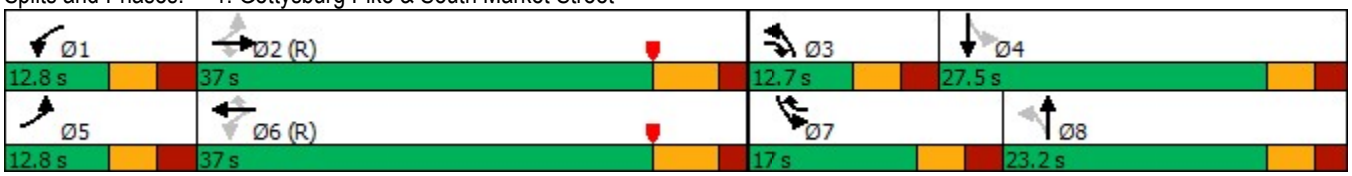


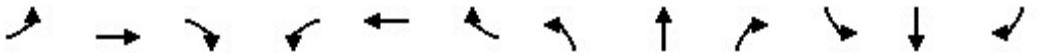
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	10.0	3.0	3.0	10.0	3.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	10.6	39.6	10.5	9.6	16.6	9.5	10.5	9.5		9.5	9.5	
Total Split (s)	12.8	37.0	12.7	12.8	37.0	17.0	12.7	23.2		17.0	27.5	
Total Split (%)	14.2%	41.1%	14.1%	14.2%	41.1%	18.9%	14.1%	25.8%		18.9%	30.6%	
Maximum Green (s)	7.0	30.6	7.0	7.0	30.6	11.3	7.0	17.7		11.3	22.0	
Yellow Time (s)	3.2	4.4	3.2	3.2	4.4	3.2	3.2	3.2		3.2	3.2	
All-Red Time (s)	2.6	2.0	2.5	2.6	2.0	2.5	2.5	2.3		2.5	2.3	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.8	5.4	4.7	4.8	5.4	4.7	4.7	4.5		4.7	4.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0	3.0	3.0	6.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	13.0	0.0	0.0	13.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max	None	None	C-Max	None	None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			22.0			22.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	41.9	33.5	46.8	43.0	36.0	53.7	24.5	16.8		33.3	21.2	
Actuated g/C Ratio	0.47	0.37	0.52	0.48	0.40	0.60	0.27	0.19		0.37	0.24	
v/c Ratio	0.23	0.42	0.11	0.41	0.45	0.14	0.35	0.84		0.85	0.57	
Control Delay	13.2	24.3	2.6	10.4	18.0	3.2	22.1	43.0		47.6	29.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	13.2	24.3	2.6	10.4	18.0	3.2	22.1	43.0		47.6	29.5	
LOS	B	C	A	B	B	A	C	D		D	C	
Approach Delay		17.7			12.7			37.9			38.6	
Approach LOS		B			B			D			D	
Queue Length 50th (ft)	25	97	0	39	93	9	30	95		81	80	
Queue Length 95th (ft)	48	155	16	m57	m144	m23	58	#200		#175	140	
Internal Link Dist (ft)		747			290			388			256	
Turn Bay Length (ft)	175		225	200		185	175			150		
Base Capacity (vph)	475	660	834	462	706	948	304	422		300	475	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.23	0.42	0.11	0.41	0.45	0.14	0.35	0.77		0.85	0.53	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 8 (9%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 25.5		Intersection LOS: C	
Intersection Capacity Utilization 74.4%		ICU Level of Service D	
Analysis Period (min) 15			

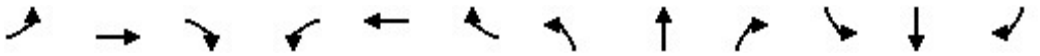
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	573	110	69	610	0	0	0	0	183	2	141
Future Volume (vph)	0	573	110	69	610	0	0	0	0	183	2	141
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	100		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.942	
Flt Protected				0.950							0.973	
Satd. Flow (prot)	0	1782	1530	1653	1800	0	0	0	0	0	1760	0
Flt Permitted				0.233							0.973	
Satd. Flow (perm)	0	1782	1530	405	1800	0	0	0	0	0	1760	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			115								42	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		199			608			453			537	
Travel Time (s)		3.4			10.4			10.3			12.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	1%	0%	1%
Adj. Flow (vph)	0	630	121	76	670	0	0	0	0	201	2	155
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	630	121	76	670	0	0	0	0	0	358	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												

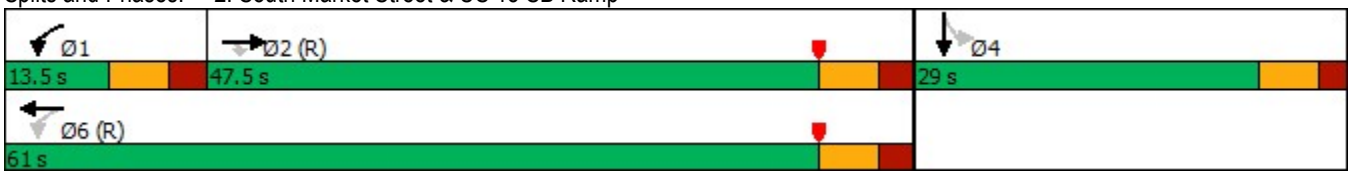


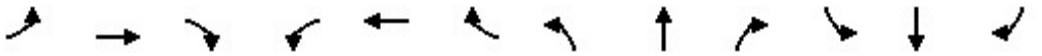
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		47.5	47.5	13.5	61.0					29.0	29.0	
Total Split (%)		52.8%	52.8%	15.0%	67.8%					32.2%	32.2%	
Maximum Green (s)		41.0	41.0	7.0	54.5					23.0	23.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		47.7	47.7	58.4	58.4						21.1	
Actuated g/C Ratio		0.53	0.53	0.65	0.65						0.23	
v/c Ratio		0.67	0.14	0.21	0.57						0.81	
Control Delay		19.0	3.7	5.8	10.0						42.9	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		19.0	3.7	5.8	10.0						42.9	
LOS		B	A	A	A						D	
Approach Delay		16.5			9.5						42.9	
Approach LOS		B			A						D	
Queue Length 50th (ft)		216	4	6	146						133	
Queue Length 95th (ft)		m306	m8	m12	185						211	
Internal Link Dist (ft)		119			528			373			457	
Turn Bay Length (ft)			125	100								
Base Capacity (vph)		945	865	373	1168						500	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.67	0.14	0.20	0.57						0.72	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 18.8		Intersection LOS: B	
Intersection Capacity Utilization 69.1%		ICU Level of Service C	
Analysis Period (min) 15			

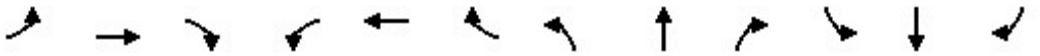
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US 15 SB Ramp





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	564	0	0	463	219	215	1	44	0	0	0
Future Volume (vph)	195	564	0	0	463	219	215	1	44	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	125		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	100			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.977				
Flt Protected	0.950							0.960				
Satd. Flow (prot)	1693	1740	0	0	1800	1479	0	1810	0	0	0	0
Flt Permitted	0.330							0.960				
Satd. Flow (perm)	588	1740	0	0	1800	1479	0	1810	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						233		11				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	207	600	0	0	493	233	229	1	47	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	207	600	0	0	493	233	0	277	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												

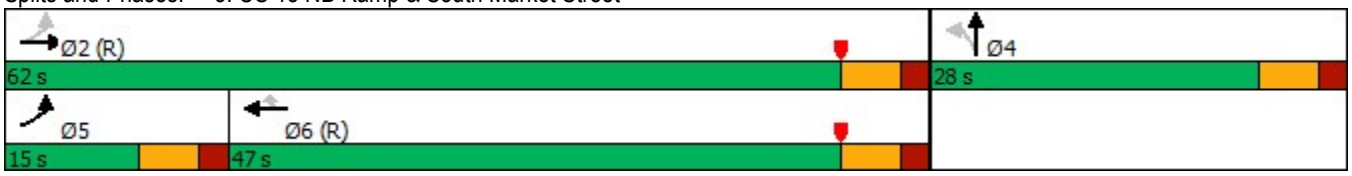


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	15.0	62.0			47.0	47.0	28.0	28.0				
Total Split (%)	16.7%	68.9%			52.2%	52.2%	31.1%	31.1%				
Maximum Green (s)	9.0	56.0			41.0	41.0	22.0	22.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	61.1	61.1			46.6	46.6		18.9				
Actuated g/C Ratio	0.68	0.68			0.52	0.52		0.21				
v/c Ratio	0.40	0.51			0.53	0.27		0.71				
Control Delay	7.7	8.5			18.1	2.8		41.8				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	7.7	8.5			18.1	2.8		41.8				
LOS	A	A			B	A		D				
Approach Delay		8.3			13.2			41.8				
Approach LOS		A			B			D				
Queue Length 50th (ft)	15	121			146	0		112				
Queue Length 95th (ft)	m36	159			239	30		172				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)	125					260						
Base Capacity (vph)	521	1180			932	878		470				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.40	0.51			0.53	0.27		0.59				

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 4 (4%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 15.4		Intersection LOS: B	
Intersection Capacity Utilization 69.1%		ICU Level of Service C	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

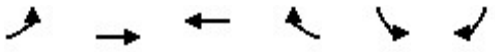
Splits and Phases: 3: US 15 NB Ramp & South Market Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	234	33	218	107	37	244
Future Volume (vph)	234	33	218	107	37	244
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		0%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.955			
Flt Protected	0.950					0.993
Satd. Flow (prot)	1770	1583	1779	0	0	1825
Flt Permitted	0.950					0.993
Satd. Flow (perm)	1770	1583	1779	0	0	1825
Link Speed (mph)	25		25			35
Link Distance (ft)	189		336			230
Travel Time (s)	5.2		9.2			4.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	260	37	242	119	41	271
Shared Lane Traffic (%)						
Lane Group Flow (vph)	260	37	361	0	0	312
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.8%		ICU Level of Service B	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	712	602	126	0	0
Future Volume (vph)	0	712	602	126	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	1900	1844	1552	0	0
Flt Permitted						
Satd. Flow (perm)	0	1900	1844	1552	0	0
Link Speed (mph)		30	40		25	
Link Distance (ft)		370	199		166	
Travel Time (s)		8.4	3.4		4.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	2%	0%	0%
Adj. Flow (vph)	0	791	669	140	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	791	669	140	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	40.8%	ICU Level of Service	A
Analysis Period (min)	15		



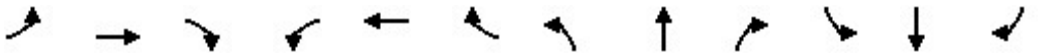
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	21	72	334	0	156	236
Future Volume (vph)	21	72	334	0	156	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-1%		-4%			4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950					0.981
Satd. Flow (prot)	1778	1591	1900	0	0	1780
Flt Permitted	0.950					0.981
Satd. Flow (perm)	1778	1591	1900	0	0	1780
Link Speed (mph)	25		25			25
Link Distance (ft)	288		455			468
Travel Time (s)	7.9		12.4			12.8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	23	80	371	0	173	262
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	80	371	0	0	435
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.97	0.97	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	73	261	23	0	257
Future Volume (vph)	0	73	261	23	0	257
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%		1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865	0.989			
Flt Protected						
Satd. Flow (prot)	0	1603	1833	0	0	1835
Flt Permitted						
Satd. Flow (perm)	0	1603	1833	0	0	1835
Link Speed (mph)	25		25			25
Link Distance (ft)	296		186			455
Travel Time (s)	8.1		5.1			12.4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	2%	2%	2%	0%	3%
Adj. Flow (vph)	0	81	290	26	0	286
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	81	316	0	0	286
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	26.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	263	86	180	297	124	99	99	209	240	125	113
Future Volume (veh/h)	101	263	86	180	297	124	99	99	209	240	125	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1949	1949	1711	1711	1711	1837	1837	1837	1794	1866	1794
Adj Flow Rate, veh/h	107	280	65	191	316	68	105	105	133	255	133	70
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	486	751	762	492	702	793	369	128	162	353	269	142
Arrive On Green	0.06	0.39	0.39	0.09	0.41	0.41	0.08	0.17	0.17	0.14	0.23	0.23
Sat Flow, veh/h	1856	1949	1652	1629	1711	1450	1750	736	933	1709	1151	606
Grp Volume(v), veh/h	107	280	65	191	316	68	105	0	238	255	0	203
Grp Sat Flow(s),veh/h/ln	1856	1949	1652	1629	1711	1450	1750	0	1669	1709	0	1757
Q Serve(g_s), s	3.0	9.3	2.0	6.3	12.0	2.0	4.3	0.0	12.4	10.5	0.0	9.0
Cycle Q Clear(g_c), s	3.0	9.3	2.0	6.3	12.0	2.0	4.3	0.0	12.4	10.5	0.0	9.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.56	1.00		0.34
Lane Grp Cap(c), veh/h	486	751	762	492	702	793	369	0	290	353	0	411
V/C Ratio(X)	0.22	0.37	0.09	0.39	0.45	0.09	0.28	0.00	0.82	0.72	0.00	0.49
Avail Cap(c_a), veh/h	533	751	762	492	702	793	391	0	347	353	0	449
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.1	19.9	13.6	14.7	19.2	9.7	27.0	0.0	35.8	25.0	0.0	29.8
Incr Delay (d2), s/veh	0.2	1.4	0.2	0.5	2.1	0.2	0.4	0.0	12.5	7.1	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.2	7.6	1.4	3.9	8.4	1.2	3.3	0.0	10.0	8.3	0.0	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.3	21.3	13.8	15.2	21.3	9.9	27.4	0.0	48.3	32.1	0.0	30.8
LnGrp LOS	B	C	B	B	C	A	C	A	D	C	A	C
Approach Vol, veh/h		452			575			343			458	
Approach Delay, s/veh		18.8			17.9			41.9			31.5	
Approach LOS		B			B			D			C	

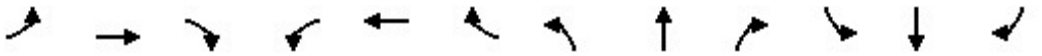
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	40.1	11.6	25.6	10.5	42.3	17.0	20.1
Change Period (Y+Rc), s	* 5.8	6.4	* 5.7	5.5	* 5.8	6.4	* 5.7	5.5
Max Green Setting (Gmax), s	* 7	30.6	* 7	22.0	* 7	30.6	* 11	17.7
Max Q Clear Time (g_c+I1), s	8.3	11.3	6.3	11.0	5.0	14.0	12.5	14.4
Green Ext Time (p_c), s	0.0	3.1	0.0	0.4	0.0	3.3	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	26.0
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



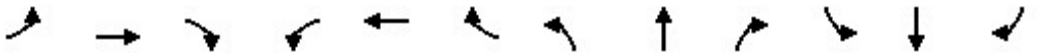
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	573	110	69	610	0	0	0	0	183	2	141
Future Volume (veh/h)	0	573	110	69	610	0	0	0	0	183	2	141
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1800	0				1860	1950	1860
Adj Flow Rate, veh/h	0	630	0	76	670	0				201	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	1	0	0	0	0				1	0	1
Cap, veh/h	0	1125		492	1332	0				263	3	
Arrive On Green	0.00	0.63	0.00	0.10	1.00	0.00				0.14	0.14	0.00
Sat Flow, veh/h	0	1786	1525	1714	1800	0				1839	18	0
Grp Volume(v), veh/h	0	630	0	76	670	0				203	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1800	0				1858	0	0
Q Serve(g_s), s	0.0	18.1	0.0	1.2	0.0	0.0				9.5	0.0	0.0
Cycle Q Clear(g_c), s	0.0	18.1	0.0	1.2	0.0	0.0				9.5	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h	0	1125		492	1332	0				266	0	
V/C Ratio(X)	0.00	0.56		0.15	0.50	0.00				0.76	0.00	
Avail Cap(c_a), veh/h	0	1125		561	1332	0				495	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.83	0.83	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	9.5	0.0	6.3	0.0	0.0				37.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.0	0.0	0.1	1.1	0.0				4.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	10.5	0.0	0.6	0.8	0.0				8.1	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	11.5	0.0	6.5	1.1	0.0				41.6	0.0	6.0
LnGrp LOS	A	B		A	A	A				D	A	A
Approach Vol, veh/h		630	A		746						358	A
Approach Delay, s/veh		11.5			1.7						26.2	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.9	62.2		17.9		72.1
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	41.0		23.0		54.5
Max Q Clear Time (g_c+I1), s	3.2	20.1		11.5		2.0
Green Ext Time (p_c), s	0.0	0.4		0.5		0.4

Intersection Summary	
HCM 6th Ctrl Delay	10.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	564	0	0	463	219	215	1	44	0	0	0
Future Volume (veh/h)	195	564	0	0	463	219	215	1	44	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1800	0	0	1800	1800	1837	1911	1837			
Adj Flow Rate, veh/h	207	600	0	0	493	0	229	1	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	1	0	0	0	0	0	0	0	0			
Cap, veh/h	596	1312	0	0	1069		290	1				
Arrive On Green	0.16	1.00	0.00	0.00	0.59	0.00	0.16	0.16	0.00			
Sat Flow, veh/h	1701	1800	0	0	1800	1525	1812	8	0			
Grp Volume(v), veh/h	207	600	0	0	493	0	230	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1800	0	0	1800	1525	1820	0	0			
Q Serve(g_s), s	4.0	0.0	0.0	0.0	13.8	0.0	10.9	0.0	0.0			
Cycle Q Clear(g_c), s	4.0	0.0	0.0	0.0	13.8	0.0	10.9	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	596	1312	0	0	1069		291	0				
V/C Ratio(X)	0.35	0.46	0.00	0.00	0.46		0.79	0.00				
Avail Cap(c_a), veh/h	649	1312	0	0	1069		465	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.69	0.69	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	6.0	0.0	0.0	0.0	10.2	0.0	36.4	0.0	0.0			
Incr Delay (d2), s/veh	0.2	0.8	0.0	0.0	1.4	0.0	4.8	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	1.7	0.5	0.0	0.0	8.7	0.0	8.9	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	6.2	0.8	0.0	0.0	11.7	0.0	41.1	0.0	6.0			
LnGrp LOS	A	A	A	A	B		D	A	A			
Approach Vol, veh/h		807			493	A		277	A			
Approach Delay, s/veh		2.2			11.7			35.2				
Approach LOS		A			B			D				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		70.6		19.4	12.2	58.4			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		56.0		22.0	9.0	41.0			
Max Q Clear Time (g_c+I1), s		2.0		12.9	6.0	15.8			
Green Ext Time (p_c), s		0.3		0.5	0.2	0.2			

Intersection Summary		
HCM 6th Ctrl Delay	10.9	
HCM 6th LOS	B	

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	6.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	234	33	218	107	37	244
Future Vol, veh/h	234	33	218	107	37	244
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	260	37	242	119	41	271

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	655	302	0	0	361	0
Stage 1	302	-	-	-	-	-
Stage 2	353	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.3	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	484	783	-	-	903	-
Stage 1	793	-	-	-	-	-
Stage 2	814	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	458	783	-	-	903	-
Mov Cap-2 Maneuver	458	-	-	-	-	-
Stage 1	793	-	-	-	-	-
Stage 2	771	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.1	0	1.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	458	783	903	-
HCM Lane V/C Ratio	-	-	0.568	0.047	0.046	-
HCM Control Delay (s)	-	-	22.7	9.8	9.2	0
HCM Lane LOS	-	-	C	A	A	A
HCM 95th %tile Q(veh)	-	-	3.5	0.1	0.1	-

Intersection	
Int Delay, s/veh	3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	21	72	334	0	156	236
Future Vol, veh/h	21	72	334	0	156	236
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-4	-	-	4
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	23	80	371	0	173	262

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	979	371	0	0	371	0
Stage 1	371	-	-	-	-	-
Stage 2	608	-	-	-	-	-
Critical Hdwy	6.22	6.12	-	-	4.3	-
Critical Hdwy Stg 1	6.2	-	-	-	-	-
Critical Hdwy Stg 2	5.22	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	323	722	-	-	896	-
Stage 1	736	-	-	-	-	-
Stage 2	633	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	250	722	-	-	896	-
Mov Cap-2 Maneuver	250	-	-	-	-	-
Stage 1	736	-	-	-	-	-
Stage 2	490	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.9	0	4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	250	722	896	-
HCM Lane V/C Ratio	-	-	0.093	0.111	0.193	-
HCM Control Delay (s)	-	-	20.9	10.6	10	0
HCM Lane LOS	-	-	C	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.4	0.7	-

Intersection	
Int Delay, s/veh	1.2

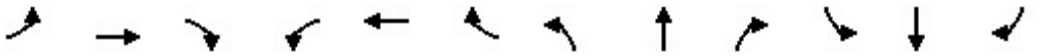
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	73	261	23	0	257
Future Vol, veh/h	0	73	261	23	0	257
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	1	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	2	2	0	3
Mvmt Flow	0	81	290	26	0	286

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	303	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.32	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	775	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	775	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

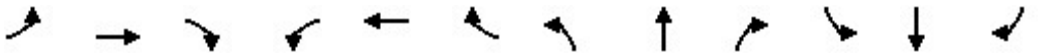
Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	775	-
HCM Lane V/C Ratio	-	-	0.105	-
HCM Control Delay (s)	-	-	10.2	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.3	-

2027 Horizon Year Mitigation Scenario
Saturday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	263	86	180	297	124	99	99	209	240	125	113
Future Volume (vph)	101	263	86	180	297	124	99	99	209	240	125	113
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12	10	12	12	11	13	12
Grade (%)		-4%			4%			-1%			1%	
Storage Length (ft)	175		225	200		185	175		200	260		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	50			75			100			0		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.963				0.850			0.850		0.929	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	3247	0	1620	1764	1499	1604	1809	1538	1645	1719	0
Flt Permitted	0.495			0.496			0.430			0.611		
Satd. Flow (perm)	879	3247	0	846	1764	1499	726	1809	1538	1058	1719	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		62				132			222		60	
Link Speed (mph)		40			40			25			35	
Link Distance (ft)		827			370			468			336	
Travel Time (s)		14.1			6.3			12.8			6.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	107	280	91	191	316	132	105	105	222	255	133	120
Shared Lane Traffic (%)												
Lane Group Flow (vph)	107	371	0	191	316	132	105	105	222	255	253	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.15	1.10	1.10	1.16	1.07	1.07	1.13	1.03	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template												
Leading Detector (ft)	34	34		34	34	34	39	39	39	34	34	
Trailing Detector (ft)	-6	-6		-6	-6	-6	-6	-6	-6	-6	-6	
Detector 1 Position(ft)	-6	-6		-6	-6	-6	-6	-6	-6	-6	-6	
Detector 1 Size(ft)	40	40		40	40	40	45	45	45	40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6	7	3	8	1	7	4	
Permitted Phases	2			6		6	8		8	4		
Detector Phase	5	2		1	6	7	3	8	1	7	4	
Switch Phase												

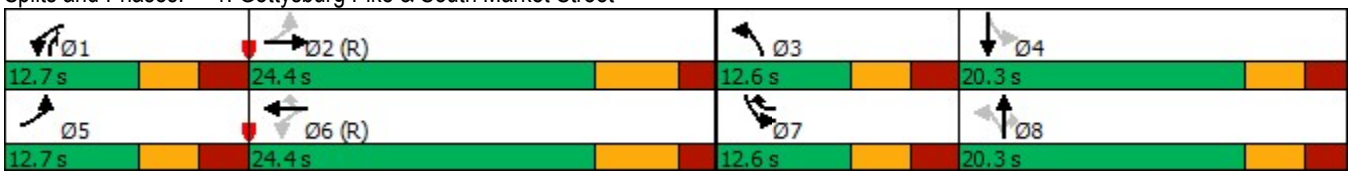


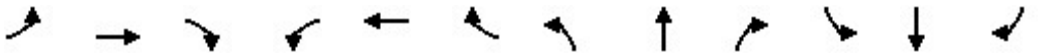
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.5	4.0		3.5	4.0	4.0	4.0	4.0	3.5	4.0	4.0	
Minimum Split (s)	10.0	22.4		10.0	26.5	9.7	9.8	21.5	10.0	9.7	21.5	
Total Split (s)	12.7	24.4		12.7	24.4	12.6	12.6	20.3	12.7	12.6	20.3	
Total Split (%)	18.1%	34.9%		18.1%	34.9%	18.0%	18.0%	29.0%	18.1%	18.0%	29.0%	
Maximum Green (s)	7.0	18.0		7.0	18.0	7.0	7.0	14.9	7.0	7.0	14.9	
Yellow Time (s)	3.1	4.4		3.1	4.4	3.1	3.1	3.1	3.1	3.1	3.1	
All-Red Time (s)	2.6	2.0		2.6	2.0	2.5	2.5	2.3	2.6	2.5	2.3	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.7	5.4		4.7	5.4	4.6	4.6	4.4	4.7	4.6	4.4	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	6.0		3.0	6.0	3.0	3.0	3.0	3.0	3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	25.0		0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	13.0		0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	None	None	None	None	None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			22.0			22.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	32.7	24.2		33.7	26.6	41.0	19.3	13.0	23.0	19.5	13.3	
Actuated g/C Ratio	0.47	0.35		0.48	0.38	0.59	0.28	0.19	0.33	0.28	0.19	
v/c Ratio	0.21	0.32		0.39	0.47	0.14	0.35	0.31	0.34	0.70	0.67	
Control Delay	11.6	16.7		7.2	13.9	1.2	18.0	26.0	3.8	29.3	28.9	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	11.6	16.7		7.2	13.9	1.2	18.0	26.0	3.8	29.3	28.9	
LOS	B	B		A	B	A	B	C	A	C	C	
Approach Delay		15.5			9.3			12.6			29.1	
Approach LOS		B			A			B			C	
Queue Length 50th (ft)	19	43		15	64	3	23	31	0	62	60	
Queue Length 95th (ft)	41	73		m35	m133	m6	46	61	30	105	114	
Internal Link Dist (ft)		747			290			388			256	
Turn Bay Length (ft)	175			200		185	175		200	260		
Base Capacity (vph)	505	1164		496	671	933	302	410	657	362	436	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.21	0.32		0.39	0.47	0.14	0.35	0.26	0.34	0.70	0.58	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 50 (71%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 16.3		Intersection LOS: B	
Intersection Capacity Utilization 58.2%		ICU Level of Service B	
Analysis Period (min) 15			

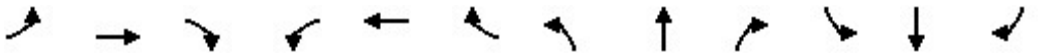
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Gettysburg Pike & South Market Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	573	110	69	610	0	0	0	0	183	2	141
Future Volume (vph)	0	573	110	69	610	0	0	0	0	183	2	141
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	11	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			1%			-2%	
Storage Length (ft)	0		125	90		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	*0.68	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.942	
Flt Protected				0.950							0.973	
Satd. Flow (prot)	0	2424	1530	1653	1800	0	0	0	0	0	1760	0
Flt Permitted				0.201							0.973	
Satd. Flow (perm)	0	2424	1530	350	1800	0	0	0	0	0	1760	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			148								54	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		199			608			453			537	
Travel Time (s)		3.4			10.4			10.3			12.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	1%	0%	1%
Adj. Flow (vph)	0	630	121	76	670	0	0	0	0	201	2	155
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	630	121	76	670	0	0	0	0	0	358	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.12	1.07	1.07	1.08	1.08	1.08	1.06	0.97	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	
Detector Template										Left		
Leading Detector (ft)		44	44	44	44					20	44	
Trailing Detector (ft)		-6	-6	-6	-6					0	-6	
Detector 1 Position(ft)		-6	-6	-6	-6					0	-6	
Detector 1 Size(ft)		50	50	50	50					20	50	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		
Detector Phase		2	2	1	6					4	4	
Switch Phase												

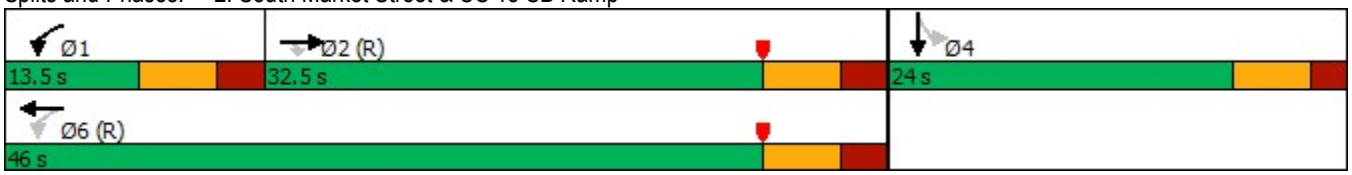


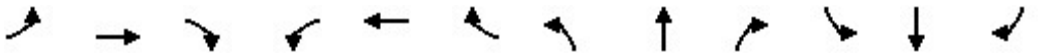
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	4.0	15.0					4.0	4.0	
Minimum Split (s)		21.5	21.5	10.5	21.5					10.0	10.0	
Total Split (s)		32.5	32.5	13.5	46.0					24.0	24.0	
Total Split (%)		46.4%	46.4%	19.3%	65.7%					34.3%	34.3%	
Maximum Green (s)		26.0	26.0	7.0	39.5					18.0	18.0	
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
All-Red Time (s)		2.5	2.5	2.5	2.5					2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0						-1.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.0	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)		1.0	1.0	3.0	1.0					3.0	3.0	
Recall Mode		C-Max	C-Max	None	C-Max					None	None	
Walk Time (s)		8.0	8.0		8.0					7.0	7.0	
Flash Dont Walk (s)		17.0	17.0		17.0					16.0	16.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		32.0	32.0	42.6	42.6						16.9	
Actuated g/C Ratio		0.46	0.46	0.61	0.61						0.24	
v/c Ratio		0.57	0.16	0.21	0.61						0.77	
Control Delay		16.6	3.2	7.4	10.3						32.6	
Queue Delay		0.0	0.0	0.0	0.0						0.0	
Total Delay		16.6	3.2	7.4	10.3						32.6	
LOS		B	A	A	B						C	
Approach Delay		14.5			10.0						32.6	
Approach LOS		B			B						C	
Queue Length 50th (ft)		113	2	16	151						94	
Queue Length 95th (ft)		158	m16	m19	210						#168	
Internal Link Dist (ft)		119			528			373			457	
Turn Bay Length (ft)			125	90								
Base Capacity (vph)		1106	779	361	1096						517	
Starvation Cap Reductn		0	0	0	0						0	
Spillback Cap Reductn		0	0	0	0						0	
Storage Cap Reductn		0	0	0	0						0	
Reduced v/c Ratio		0.57	0.16	0.21	0.61						0.69	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 16.2		Intersection LOS: B	
Intersection Capacity Utilization 65.1%		ICU Level of Service C	
Analysis Period (min) 15			
* User Entered Value			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

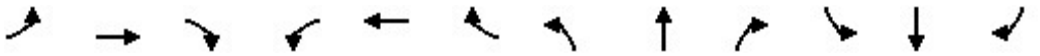
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: South Market Street & US 15 SB Ramp





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	564	0	0	463	219	215	1	44	0	0	0
Future Volume (vph)	195	564	0	0	463	219	215	1	44	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	12	11	12	14	12	12	12	12
Grade (%)		0%			0%			-1%			0%	
Storage Length (ft)	0		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	0			25			25			25		
Lane Util. Factor	*1.00	*1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.977				
Flt Protected	0.950							0.960				
Satd. Flow (prot)	1693	1740	0	0	1800	1479	0	1810	0	0	0	0
Flt Permitted	0.296							0.960				
Satd. Flow (perm)	528	1740	0	0	1800	1479	0	1810	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						233		14				
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		608			326			414			668	
Travel Time (s)		10.4			5.6			9.4			15.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	207	600	0	0	493	233	229	1	47	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	207	600	0	0	493	233	0	277	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		23			23			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.07	1.12	1.07	0.98	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1				
Detector Template							Left					
Leading Detector (ft)	40	40			40	40	20	40				
Trailing Detector (ft)	-10	-10			-10	-10	0	-10				
Detector 1 Position(ft)	-10	-10			-10	-10	0	-10				
Detector 1 Size(ft)	50	50			50	50	20	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			4				
Permitted Phases	2					6	4					
Detector Phase	5	2			6	6	4	4				
Switch Phase												

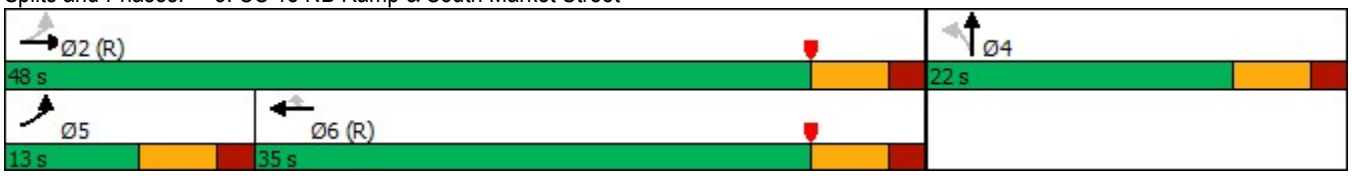


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	15.0			4.0	4.0	4.0	4.0				
Minimum Split (s)	10.0	31.0			21.0	21.0	16.0	16.0				
Total Split (s)	13.0	48.0			35.0	35.0	22.0	22.0				
Total Split (%)	18.6%	68.6%			50.0%	50.0%	31.4%	31.4%				
Maximum Green (s)	7.0	42.0			29.0	29.0	16.0	16.0				
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0		-1.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	1.0			1.0	1.0	3.0	3.0				
Recall Mode	None	C-Max			C-Max	C-Max	None	None				
Walk Time (s)		8.0			8.0	8.0	7.0	7.0				
Flash Dont Walk (s)		17.0			17.0	17.0	16.0	16.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	44.9	44.9			32.0	32.0		15.1				
Actuated g/C Ratio	0.64	0.64			0.46	0.46		0.22				
v/c Ratio	0.44	0.54			0.60	0.29		0.69				
Control Delay	6.6	6.6			18.7	3.0		33.3				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	6.6	6.6			18.7	3.0		33.3				
LOS	A	A			B	A		C				
Approach Delay		6.6			13.7			33.3				
Approach LOS		A			B			C				
Queue Length 50th (ft)	13	112			126	0		81				
Queue Length 95th (ft)	19	160			206	29		140				
Internal Link Dist (ft)		528			246			334			588	
Turn Bay Length (ft)						260						
Base Capacity (vph)	472	1116			823	802		450				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.44	0.54			0.60	0.29		0.62				

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 34 (49%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 13.5		Intersection LOS: B	
Intersection Capacity Utilization 65.1%		ICU Level of Service C	
Analysis Period (min) 15			

* User Entered Value

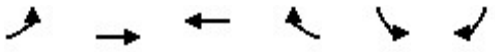
Splits and Phases: 3: US 15 NB Ramp & South Market Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	234	33	218	107	37	244
Future Volume (vph)	234	33	218	107	37	244
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		0%			1%
Storage Length (ft)	0	0		0	75	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.955			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1779	0	1761	1835
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	1779	0	1761	1835
Link Speed (mph)	25		30			25
Link Distance (ft)	189		336			230
Travel Time (s)	5.2		7.6			6.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	260	37	242	119	41	271
Shared Lane Traffic (%)						
Lane Group Flow (vph)	260	37	361	0	41	271
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.3%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	712	602	126	0	0
Future Volume (vph)	0	712	602	126	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	4%		0%	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	3610	1844	1552	0	0
Flt Permitted						
Satd. Flow (perm)	0	3610	1844	1552	0	0
Link Speed (mph)		30	40		30	
Link Distance (ft)		370	199		166	
Travel Time (s)		8.4	3.4		3.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	2%	0%	0%
Adj. Flow (vph)	0	791	669	140	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	791	669	140	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	35.0%	ICU Level of Service	A
Analysis Period (min)	15		



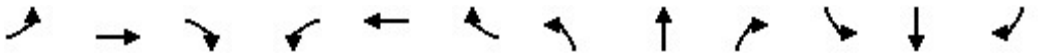
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	21	72	334	0	156	236
Future Volume (vph)	21	72	334	0	156	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-1%		-4%			4%
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1778	1591	1900	0	1734	1808
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1778	1591	1900	0	1734	1808
Link Speed (mph)	25		25			25
Link Distance (ft)	288		455			468
Travel Time (s)	7.9		12.4			12.8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	23	80	371	0	173	262
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	80	371	0	173	262
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.97	0.97	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.6%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	73	261	23	0	257
Future Volume (vph)	0	73	261	23	0	257
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%		1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865	0.989			
Flt Protected						
Satd. Flow (prot)	0	1603	1833	0	0	1835
Flt Permitted						
Satd. Flow (perm)	0	1603	1833	0	0	1835
Link Speed (mph)	25		25			25
Link Distance (ft)	296		186			455
Travel Time (s)	8.1		5.1			12.4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	2%	2%	2%	0%	3%
Adj. Flow (vph)	0	81	290	26	0	286
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	81	316	0	0	286
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	26.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	263	86	180	297	124	99	99	209	240	125	113
Future Volume (veh/h)	101	263	86	180	297	124	99	99	209	240	125	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1949	1949	1711	1711	1711	1837	1837	1837	1794	1866	1794
Adj Flow Rate, veh/h	107	280	65	191	316	68	105	105	133	255	133	70
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	529	1132	258	576	714	771	303	232	366	378	181	95
Arrive On Green	0.07	0.38	0.38	0.11	0.42	0.42	0.08	0.13	0.13	0.11	0.16	0.16
Sat Flow, veh/h	1856	2994	684	1629	1711	1450	1750	1837	1557	1709	1151	606
Grp Volume(v), veh/h	107	171	174	191	316	68	105	105	133	255	0	203
Grp Sat Flow(s),veh/h/ln	1856	1852	1826	1629	1711	1450	1750	1837	1557	1709	0	1757
Q Serve(g_s), s	2.4	4.4	4.6	4.8	9.2	1.6	3.5	3.7	5.0	8.0	0.0	7.7
Cycle Q Clear(g_c), s	2.4	4.4	4.6	4.8	9.2	1.6	3.5	3.7	5.0	8.0	0.0	7.7
Prop In Lane	1.00		0.37	1.00		1.00	1.00		1.00	1.00		0.34
Lane Grp Cap(c), veh/h	529	700	690	576	714	771	303	232	366	378	0	276
V/C Ratio(X)	0.20	0.24	0.25	0.33	0.44	0.09	0.35	0.45	0.36	0.67	0.00	0.74
Avail Cap(c_a), veh/h	612	700	690	585	714	771	357	417	523	378	0	399
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.7	14.9	15.0	10.6	14.6	8.1	23.5	28.4	22.4	24.4	0.0	28.1
Incr Delay (d2), s/veh	0.2	0.8	0.9	0.3	2.0	0.2	0.7	1.4	0.6	4.7	0.0	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	3.3	3.3	2.7	6.3	0.9	2.6	3.0	3.3	7.1	0.0	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.9	15.7	15.8	10.9	16.6	8.3	24.2	29.7	23.0	29.1	0.0	32.2
LnGrp LOS	B	B	B	B	B	A	C	C	C	C	A	C
Approach Vol, veh/h		452			575			343			458	
Approach Delay, s/veh		14.9			13.7			25.4			30.5	
Approach LOS		B			B			C			C	

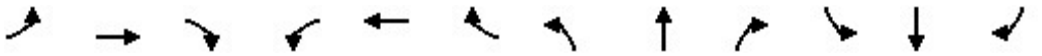
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	31.9	10.4	15.4	9.6	34.6	12.6	13.2
Change Period (Y+Rc), s	5.7	6.4	5.6	* 5.4	5.7	6.4	5.6	* 5.4
Max Green Setting (Gmax), s	7.0	18.0	7.0	* 15	7.0	18.0	7.0	* 15
Max Q Clear Time (g_c+I1), s	6.8	6.6	5.5	9.7	4.4	11.2	10.0	7.0
Green Ext Time (p_c), s	0.0	2.3	0.0	0.3	0.1	1.9	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	20.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



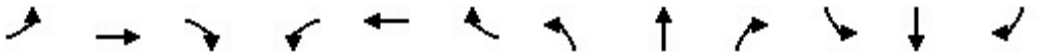
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	573	110	69	610	0	0	0	0	183	2	141
Future Volume (veh/h)	0	573	110	69	610	0	0	0	0	183	2	141
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1800	0				1860	1950	1860
Adj Flow Rate, veh/h	0	630	0	76	670	0				201	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	1	0	0	0	0				1	0	1
Cap, veh/h	0	1366		517	1259	0				277	3	
Arrive On Green	0.00	0.56	0.00	0.04	0.47	0.00				0.15	0.15	0.00
Sat Flow, veh/h	0	3000	1525	1714	1800	0				1839	18	0
Grp Volume(v), veh/h	0	630	0	76	670	0				203	0	0
Grp Sat Flow(s),veh/h/ln	0	1214	1525	1714	1800	0				1858	0	0
Q Serve(g_s), s	0.0	10.7	0.0	1.1	18.4	0.0				7.3	0.0	0.0
Cycle Q Clear(g_c), s	0.0	10.7	0.0	1.1	18.4	0.0				7.3	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h	0	1366		517	1259	0				280	0	
V/C Ratio(X)	0.00	0.46		0.15	0.53	0.00				0.73	0.00	
Avail Cap(c_a), veh/h	0	1366		612	1259	0				504	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.77	0.77	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	9.0	0.0	5.9	10.5	0.0				28.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.1	0.0	0.1	1.2	0.0				3.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	4.3	0.0	0.5	11.7	0.0				6.1	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	10.2	0.0	6.0	11.7	0.0				31.9	0.0	6.0
LnGrp LOS	A	B		A	B	A				C	A	A
Approach Vol, veh/h		630	A		746						358	A
Approach Delay, s/veh		10.2			11.1						20.7	
Approach LOS		B			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.6	44.9		15.5		54.5
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	26.0		18.0		39.5
Max Q Clear Time (g_c+I1), s	3.1	12.7		9.3		20.4
Green Ext Time (p_c), s	0.0	0.5		0.4		0.4

Intersection Summary	
HCM 6th Ctrl Delay	12.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	564	0	0	463	219	215	1	44	0	0	0
Future Volume (veh/h)	195	564	0	0	463	219	215	1	44	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1800	0	0	1800	1800	1837	1911	1837			
Adj Flow Rate, veh/h	207	600	0	0	493	0	229	1	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	1	0	0	0	0	0	0	0	0			
Cap, veh/h	560	1243	0	0	950		302	1				
Arrive On Green	0.06	0.46	0.00	0.00	0.53	0.00	0.17	0.17	0.00			
Sat Flow, veh/h	1701	1800	0	0	1800	1525	1812	8	0			
Grp Volume(v), veh/h	207	600	0	0	493	0	230	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1800	0	0	1800	1525	1820	0	0			
Q Serve(g_s), s	3.4	16.1	0.0	0.0	12.5	0.0	8.4	0.0	0.0			
Cycle Q Clear(g_c), s	3.4	16.1	0.0	0.0	12.5	0.0	8.4	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	560	1243	0	0	950		303	0				
V/C Ratio(X)	0.37	0.48	0.00	0.00	0.52		0.76	0.00				
Avail Cap(c_a), veh/h	599	1243	0	0	950		442	0				
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.80	0.80	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	7.2	10.2	0.0	0.0	10.7	0.0	27.8	0.0	0.0			
Incr Delay (d2), s/veh	0.3	1.1	0.0	0.0	2.0	0.0	4.4	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	1.6	10.5	0.0	0.0	8.0	0.0	7.0	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	7.5	11.2	0.0	0.0	12.8	0.0	32.2	0.0	6.0			
LnGrp LOS	A	B	A	A	B		C	A	A			
Approach Vol, veh/h		807			493	A		277	A			
Approach Delay, s/veh		10.3			12.8			27.8				
Approach LOS		B			B			C				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		53.3		16.7	11.4	41.9			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		42.0		16.0	7.0	29.0			
Max Q Clear Time (g_c+I1), s		18.1		10.4	5.4	14.5			
Green Ext Time (p_c), s		0.3		0.4	0.1	0.2			

Intersection Summary		
HCM 6th Ctrl Delay	14.1	
HCM 6th LOS	B	

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	6.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	234	33	218	107	37	244
Future Vol, veh/h	234	33	218	107	37	244
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	260	37	242	119	41	271

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	655	302	0	0	361	0
Stage 1	302	-	-	-	-	-
Stage 2	353	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.3	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	484	783	-	-	903	-
Stage 1	793	-	-	-	-	-
Stage 2	814	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	462	783	-	-	903	-
Mov Cap-2 Maneuver	462	-	-	-	-	-
Stage 1	793	-	-	-	-	-
Stage 2	777	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.8	0	1.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	462	783	903	-
HCM Lane V/C Ratio	-	-	0.563	0.047	0.046	-
HCM Control Delay (s)	-	-	22.4	9.8	9.2	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	3.4	0.1	0.1	-

Intersection	
Int Delay, s/veh	3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	21	72	334	0	156	236
Future Vol, veh/h	21	72	334	0	156	236
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-4	-	-	4
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	23	80	371	0	173	262

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	979	371	0	0	371	0
Stage 1	371	-	-	-	-	-
Stage 2	608	-	-	-	-	-
Critical Hdwy	6.22	6.12	-	-	4.3	-
Critical Hdwy Stg 1	6.2	-	-	-	-	-
Critical Hdwy Stg 2	5.22	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	323	722	-	-	896	-
Stage 1	736	-	-	-	-	-
Stage 2	633	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	261	722	-	-	896	-
Mov Cap-2 Maneuver	261	-	-	-	-	-
Stage 1	736	-	-	-	-	-
Stage 2	511	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.7	0	4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	261	722	896	-
HCM Lane V/C Ratio	-	-	0.089	0.111	0.193	-
HCM Control Delay (s)	-	-	20.1	10.6	10	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.4	0.7	-

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	73	261	23	0	257
Future Vol, veh/h	0	73	261	23	0	257
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	1	-	-	1
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	2	2	0	3
Mvmt Flow	0	81	290	26	0	286

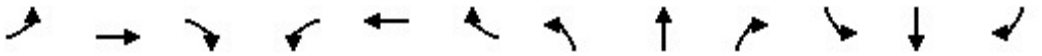
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	303	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.32	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	775	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	775	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	775	-
HCM Lane V/C Ratio	-	-	0.105	-
HCM Control Delay (s)	-	-	10.2	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.3	-

Queue Length Worksheets

50% Queue Data



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	264	50	151	516	73	103	74	236	37	37	51
Future Volume (veh/h)	36	264	50	151	516	73	103	74	236	37	37	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1864	1878	1864	1697	1669	1669	1780	1837	1837	1794	1866	1710
Adj Flow Rate, veh/h	43	314	55	180	614	60	123	88	175	44	44	40
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	6	5	6	1	3	3	4	0	0	0	0	6
Cap, veh/h	509	702	123	534	845	716	366	105	208	195	128	116
Arrive On Green	0.04	0.45	0.45	0.18	1.00	1.00	0.09	0.19	0.19	0.04	0.14	0.14
Sat Flow, veh/h	1775	1556	273	1616	1669	1414	1696	549	1092	1709	900	819
Grp Volume(v), veh/h	43	0	369	180	614	60	123	0	263	44	0	84
Grp Sat Flow(s),veh/h/ln	1775	0	1829	1616	1669	1414	1696	0	1641	1709	0	1719
Q Serve(g_s), s	1.1	0.0	11.8	4.8	0.0	0.0	5.0	0.0	13.1	1.8	0.0	3.7
Cycle Q Clear(g_c), s	1.1	0.0	11.8	4.8	0.0	0.0	5.0	0.0	13.1	1.8	0.0	3.7
Prop In Lane	1.00		0.15	1.00		1.00	1.00		0.67	1.00		0.48
Lane Grp Cap(c), veh/h	509	0	825	534	845	716	366	0	312	195	0	244
V/C Ratio(X)	0.08	0.00	0.45	0.34	0.73	0.08	0.34	0.00	0.84	0.23	0.00	0.34
Avail Cap(c_a), veh/h	608	0	825	534	845	716	390	0	320	302	0	336
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.82	0.82	0.82	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.5	0.0	16.1	9.5	0.0	0.0	25.7	0.0	33.2	29.6	0.0	32.9
Incr Delay (d2), s/veh	0.1	0.0	1.8	0.3	4.5	0.2	0.5	0.0	17.7	0.6	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	4.9	1.3	1.1	0.0	2.0	0.0	6.7	0.8	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.6	0.0	17.8	9.8	4.5	0.2	26.2	0.0	50.8	30.2	0.0	33.7
LnGrp LOS	B	A	B	A	A	A	C	A	D	C	A	C
Approach Vol, veh/h		412			854			386			128	
Approach Delay, s/veh		17.2			5.3			43.0			32.5	
Approach LOS		B			A			D			C	

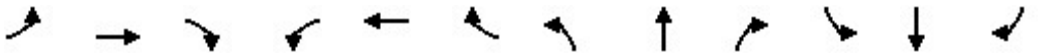
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	43.7	11.8	16.5	8.3	48.4	7.7	20.6
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 6.7	31.6	* 7.8	15.6	* 6.7	31.6	* 7.8	15.6
Max Q Clear Time (g_c+I1), s	6.8	13.8	7.0	5.7	3.1	2.0	3.8	15.1
Green Ext Time (p_c), s	0.0	3.4	0.0	0.1	0.0	8.7	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	18.2
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



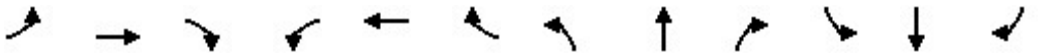
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	449	91	46	588	0	0	0	0	163	0	149
Future Volume (veh/h)	0	449	91	46	588	0	0	0	0	163	0	149
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1744	1758	1772	1758	0				1832	1950	1832
Adj Flow Rate, veh/h	0	510	0	52	668	0				185	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	4	3	2	3	0				3	0	3
Cap, veh/h	0	1106		590	1308	0				246	0	
Arrive On Green	0.00	0.63	0.00	0.01	0.25	0.00				0.13	0.00	0.00
Sat Flow, veh/h	0	1744	1490	1688	1758	0				1857	0	0
Grp Volume(v), veh/h	0	510	0	52	668	0				185	0	0
Grp Sat Flow(s),veh/h/ln	0	1744	1490	1688	1758	0				1857	0	0
Q Serve(g_s), s	0.0	12.9	0.0	0.8	27.9	0.0				8.2	0.0	0.0
Cycle Q Clear(g_c), s	0.0	12.9	0.0	0.8	27.9	0.0				8.2	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1106		590	1308	0				246	0	
V/C Ratio(X)	0.00	0.46		0.09	0.51	0.00				0.75	0.00	
Avail Cap(c_a), veh/h	0	1106		663	1308	0				349	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.88	0.00	0.77	0.77	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.0	0.0	5.4	18.7	0.0				35.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.2	0.0	0.0	1.1	0.0				5.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.2	0.0	0.2	13.2	0.0				4.0	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	9.3	0.0	5.4	19.8	0.0				41.0	0.0	6.0
LnGrp LOS	A	A		A	B	A				D	A	A
Approach Vol, veh/h		510	A		720						354	A
Approach Delay, s/veh		9.3			18.8						24.3	
Approach LOS		A			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.3	59.4		16.3		68.7
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	6.5	44.5		15.0		57.5
Max Q Clear Time (g_c+I1), s	2.8	14.9		10.2		29.9
Green Ext Time (p_c), s	0.0	0.3		0.2		0.4

Intersection Summary	
HCM 6th Ctrl Delay	17.0
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



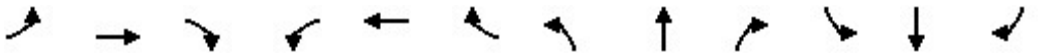
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	431	184	0	0	450	267	156	1	108	0	0	0
Future Volume (veh/h)	431	184	0	0	450	267	156	1	108	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1744	1716	0	0	1758	1800	1724	1911	1823			
Adj Flow Rate, veh/h	474	202	0	0	495	0	171	1	0			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	4	6	0	0	3	0	8	0	1			
Cap, veh/h	669	1296	0	0	929		230	1				
Arrive On Green	0.28	1.00	0.00	0.00	0.53	0.00	0.13	0.13	0.00			
Sat Flow, veh/h	1661	1716	0	0	1758	1525	1810	11	0			
Grp Volume(v), veh/h	474	202	0	0	495	0	172	0	0			
Grp Sat Flow(s),veh/h/ln	1661	1716	0	0	1758	1525	1820	0	0			
Q Serve(g_s), s	11.2	0.0	0.0	0.0	15.7	0.0	7.7	0.0	0.0			
Cycle Q Clear(g_c), s	11.2	0.0	0.0	0.0	15.7	0.0	7.7	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		0.00			
Lane Grp Cap(c), veh/h	669	1296	0	0	929		231	0				
V/C Ratio(X)	0.71	0.16	0.00	0.00	0.53		0.74	0.00				
Avail Cap(c_a), veh/h	683	1296	0	0	929		343	0				
HCM Platoon Ratio	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.87	0.87	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	7.2	0.0	0.0	0.0	13.1	0.0	35.8	0.0	0.0			
Incr Delay (d2), s/veh	2.4	0.2	0.0	0.0	2.2	0.0	4.8	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.2	0.1	0.0	0.0	5.9	0.0	3.7	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	9.6	0.2	0.0	0.0	15.3	0.0	40.5	0.0	6.0			
LnGrp LOS	A	A	A	A	B		D	A	A			
Approach Vol, veh/h		676			495	A		291	A			
Approach Delay, s/veh		6.8			15.3			26.4				
Approach LOS		A			B			C				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		69.2		15.8	19.3	49.9			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		58.0		15.0	14.0	38.0			
Max Q Clear Time (g_c+I1), s		2.0		9.7	13.2	17.7			
Green Ext Time (p_c), s		0.6		0.2	0.0	0.2			

Intersection Summary									
HCM 6th Ctrl Delay		13.6							
HCM 6th LOS		B							

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	268	51	153	524	74	105	75	240	38	38	52
Future Volume (veh/h)	37	268	51	153	524	74	105	75	240	38	38	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1864	1878	1864	1697	1669	1669	1780	1837	1837	1794	1866	1710
Adj Flow Rate, veh/h	44	319	49	182	624	69	125	89	197	45	45	41
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	6	5	6	1	3	3	4	0	0	0	0	6
Cap, veh/h	530	756	116	571	886	751	316	76	167	164	88	80
Arrive On Green	0.04	0.48	0.48	0.18	1.00	1.00	0.09	0.15	0.15	0.04	0.10	0.10
Sat Flow, veh/h	1775	1590	244	1616	1669	1414	1696	509	1126	1709	899	819
Grp Volume(v), veh/h	44	0	368	182	624	69	125	0	286	45	0	86
Grp Sat Flow(s),veh/h/ln	1775	0	1834	1616	1669	1414	1696	0	1635	1709	0	1719
Q Serve(g_s), s	1.0	0.0	10.5	4.4	0.0	0.0	5.0	0.0	11.9	1.9	0.0	3.8
Cycle Q Clear(g_c), s	1.0	0.0	10.5	4.4	0.0	0.0	5.0	0.0	11.9	1.9	0.0	3.8
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.69	1.00		0.48
Lane Grp Cap(c), veh/h	530	0	872	571	886	751	316	0	243	164	0	167
V/C Ratio(X)	0.08	0.00	0.42	0.32	0.70	0.09	0.40	0.00	1.18	0.27	0.00	0.51
Avail Cap(c_a), veh/h	643	0	872	586	886	751	325	0	243	261	0	256
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.78	0.78	0.78	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.8	0.0	13.8	8.1	0.0	0.0	26.8	0.0	34.1	30.7	0.0	34.3
Incr Delay (d2), s/veh	0.1	0.0	1.5	0.2	3.7	0.2	0.8	0.0	113.8	0.9	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	4.2	1.1	0.9	0.0	2.1	0.0	12.3	0.8	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.9	0.0	15.3	8.3	3.7	0.2	27.6	0.0	147.8	31.6	0.0	36.7
LnGrp LOS	A	A	B	A	A	A	C	A	F	C	A	D
Approach Vol, veh/h		412			875			411			131	
Approach Delay, s/veh		14.7			4.4			111.2			35.0	
Approach LOS		B			A			F			C	

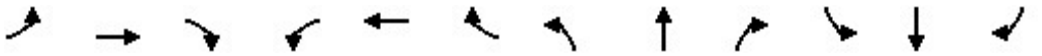
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.6	43.4	11.8	12.2	8.2	47.9	7.7	16.3
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 7	31.8	* 7	10.9	* 7	31.8	* 7	10.9
Max Q Clear Time (g_c+I1), s	6.4	12.5	7.0	5.8	3.0	2.0	3.9	13.9
Green Ext Time (p_c), s	0.0	3.5	0.0	0.1	0.0	9.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	32.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



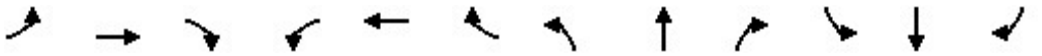
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	456	92	47	597	0	0	0	0	165	0	151
Future Volume (veh/h)	0	456	92	47	597	0	0	0	0	165	0	151
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1744	1758	1772	1758	0				1832	1950	1832
Adj Flow Rate, veh/h	0	518	0	53	678	0				188	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	4	3	2	3	0				3	0	3
Cap, veh/h	0	1072		569	1285	0				256	0	
Arrive On Green	0.00	0.61	0.00	0.06	0.97	0.00				0.14	0.00	0.00
Sat Flow, veh/h	0	1744	1490	1688	1758	0				1857	0	0
Grp Volume(v), veh/h	0	518	0	53	678	0				188	0	0
Grp Sat Flow(s),veh/h/ln	0	1744	1490	1688	1758	0				1857	0	0
Q Serve(g_s), s	0.0	13.0	0.0	0.8	1.8	0.0				7.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	13.0	0.0	0.8	1.8	0.0				7.8	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1072		569	1285	0				256	0	
V/C Ratio(X)	0.00	0.48		0.09	0.53	0.00				0.73	0.00	
Avail Cap(c_a), veh/h	0	1072		658	1285	0				487	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.88	0.00	0.65	0.65	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.4	0.0	5.5	0.3	0.0				33.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.4	0.0	0.0	1.0	0.0				4.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.3	0.0	0.2	0.6	0.0				3.7	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	9.8	0.0	5.5	1.3	0.0				37.1	0.0	6.0
LnGrp LOS	A	A		A	A	A				D	A	A
Approach Vol, veh/h		518	A		731						360	A
Approach Delay, s/veh		9.8			1.6						22.3	
Approach LOS		A			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.3	54.7		16.0		64.0
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	34.0		20.0		47.5
Max Q Clear Time (g_c+I1), s	2.8	15.0		9.8		3.8
Green Ext Time (p_c), s	0.0	0.3		0.4		0.4

Intersection Summary	
HCM 6th Ctrl Delay	8.9
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



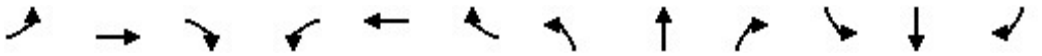
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	437	187	0	0	457	271	158	1	110	0	0	0
Future Volume (veh/h)	437	187	0	0	457	271	158	1	110	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1744	1716	0	0	1758	1800	1724	1911	1823			
Adj Flow Rate, veh/h	480	205	0	0	502	0	174	1	0			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	4	6	0	0	3	0	8	0	1			
Cap, veh/h	647	1278	0	0	924		236	1				
Arrive On Green	0.05	0.25	0.00	0.00	0.53	0.00	0.13	0.13	0.00			
Sat Flow, veh/h	1661	1716	0	0	1758	1525	1810	10	0			
Grp Volume(v), veh/h	480	205	0	0	502	0	175	0	0			
Grp Sat Flow(s),veh/h/ln	1661	1716	0	0	1758	1525	1820	0	0			
Q Serve(g_s), s	8.4	7.5	0.0	0.0	15.2	0.0	7.4	0.0	0.0			
Cycle Q Clear(g_c), s	8.4	7.5	0.0	0.0	15.2	0.0	7.4	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		0.00			
Lane Grp Cap(c), veh/h	647	1278	0	0	924		237	0				
V/C Ratio(X)	0.74	0.16	0.00	0.00	0.54		0.74	0.00				
Avail Cap(c_a), veh/h	781	1278	0	0	924		341	0				
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.83	0.83	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	10.6	10.5	0.0	0.0	12.6	0.0	33.5	0.0	0.0			
Incr Delay (d2), s/veh	2.6	0.2	0.0	0.0	2.3	0.0	4.9	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.0	2.3	0.0	0.0	5.7	0.0	3.5	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	13.2	10.8	0.0	0.0	14.9	0.0	38.3	0.0	6.0			
LnGrp LOS	B	B	A	A	B		D	A	A			
Approach Vol, veh/h		685			502	A		296	A			
Approach Delay, s/veh		12.4			14.9			25.1				
Approach LOS		B			B			C				

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	64.6	15.4	17.5	47.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	54.0	14.0	18.0	30.0
Max Q Clear Time (g_c+I1), s	9.5	9.4	10.4	17.2
Green Ext Time (p_c), s	0.1	0.2	1.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay	15.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	274	52	153	555	74	112	75	240	38	38	55
Future Volume (veh/h)	38	274	52	153	555	74	112	75	240	38	38	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1864	1878	1864	1697	1669	1669	1780	1837	1837	1794	1866	1710
Adj Flow Rate, veh/h	45	326	50	182	661	69	133	89	197	45	45	44
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	6	5	6	1	3	3	4	0	0	0	0	6
Cap, veh/h	467	818	839	606	727	675	333	87	193	151	101	99
Arrive On Green	0.14	0.44	0.44	0.27	0.87	0.87	0.10	0.17	0.17	0.04	0.12	0.12
Sat Flow, veh/h	1775	1878	1579	1616	1669	1414	1696	509	1126	1709	866	847
Grp Volume(v), veh/h	45	326	50	182	661	69	133	0	286	45	0	89
Grp Sat Flow(s),veh/h/ln	1775	1878	1579	1616	1669	1414	1696	0	1635	1709	0	1714
Q Serve(g_s), s	0.0	10.7	0.5	0.0	22.1	0.2	5.9	0.0	15.4	2.0	0.0	4.4
Cycle Q Clear(g_c), s	0.0	10.7	0.5	0.0	22.1	0.2	5.9	0.0	15.4	2.0	0.0	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.69	1.00		0.49
Lane Grp Cap(c), veh/h	467	818	839	606	727	675	333	0	280	151	0	200
V/C Ratio(X)	0.10	0.40	0.06	0.30	0.91	0.10	0.40	0.00	1.02	0.30	0.00	0.44
Avail Cap(c_a), veh/h	467	818	839	606	727	675	366	0	280	232	0	248
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.76	0.76	0.76	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.7	17.3	2.6	13.5	4.7	0.8	28.8	0.0	37.3	33.3	0.0	37.0
Incr Delay (d2), s/veh	0.1	1.5	0.1	0.2	14.1	0.2	0.8	0.0	59.7	1.1	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	4.6	0.3	1.9	4.6	0.1	2.4	0.0	10.7	0.9	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.8	18.8	2.7	13.7	18.8	1.0	29.6	0.0	97.0	34.4	0.0	38.6
LnGrp LOS	C	B	A	B	B	A	C	A	F	C	A	D
Approach Vol, veh/h		421			912			419			134	
Approach Delay, s/veh		17.2			16.4			75.6			37.2	
Approach LOS		B			B			E			D	

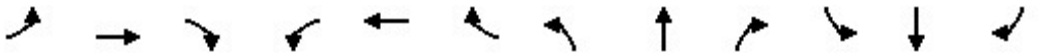
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.1	44.6	13.3	15.0	17.1	44.6	8.4	19.9
Change Period (Y+Rc), s	5.8	* 6.4	* 5.7	5.5	5.8	* 6.4	* 5.7	5.5
Max Green Setting (Gmax), s	7.0	* 38	* 9.4	12.0	7.0	* 38	* 7	14.4
Max Q Clear Time (g_c+I1), s	2.0	12.7	7.9	6.4	2.0	24.1	4.0	17.4
Green Ext Time (p_c), s	0.2	4.0	0.1	0.1	0.0	6.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	31.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



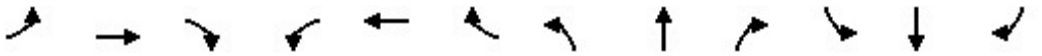
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	461	93	47	621	0	0	0	0	165	0	158
Future Volume (veh/h)	0	461	93	47	621	0	0	0	0	165	0	158
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1744	1758	1772	1758	0				1832	1950	1832
Adj Flow Rate, veh/h	0	524	0	53	706	0				188	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	4	3	2	3	0				3	0	3
Cap, veh/h	0	794		636	1315	0				251	0	
Arrive On Green	0.00	0.46	0.00	0.23	0.75	0.00				0.14	0.00	0.00
Sat Flow, veh/h	0	1744	1490	1688	1758	0				1857	0	0
Grp Volume(v), veh/h	0	524	0	53	706	0				188	0	0
Grp Sat Flow(s),veh/h/ln	0	1744	1490	1688	1758	0				1857	0	0
Q Serve(g_s), s	0.0	21.0	0.0	0.0	15.2	0.0				8.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	21.0	0.0	0.0	15.2	0.0				8.8	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	794		636	1315	0				251	0	
V/C Ratio(X)	0.00	0.66		0.08	0.54	0.00				0.75	0.00	
Avail Cap(c_a), veh/h	0	794		636	1315	0				516	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.93	0.00	0.64	0.64	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	19.1	0.0	16.1	4.8	0.0				37.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	4.0	0.0	0.0	1.0	0.0				4.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.6	0.0	0.6	3.9	0.0				4.2	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	23.0	0.0	16.2	5.8	0.0				41.9	0.0	6.0
LnGrp LOS	A	C		B	A	A				D	A	A
Approach Vol, veh/h		524	A		759						368	A
Approach Delay, s/veh		23.0			6.5						24.3	
Approach LOS		C			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	26.3	46.5		17.2		72.8
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	40.0		24.0		53.5
Max Q Clear Time (g_c+I1), s	2.0	23.0		10.8		17.2
Green Ext Time (p_c), s	0.0	0.3		0.5		0.4

Intersection Summary	
HCM 6th Ctrl Delay	15.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



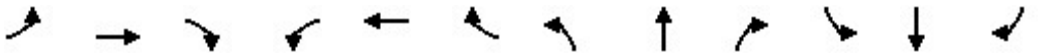
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	441	188	0	0	474	271	165	1	110	0	0	0
Future Volume (veh/h)	441	188	0	0	474	271	165	1	110	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1744	1716	0	0	1758	1800	1724	1911	1823			
Adj Flow Rate, veh/h	485	207	0	0	521	0	181	1	0			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	4	6	0	0	3	0	8	0	1			
Cap, veh/h	642	1299	0	0	975		238	1				
Arrive On Green	0.05	0.25	0.00	0.00	0.55	0.00	0.13	0.13	0.00			
Sat Flow, veh/h	1661	1716	0	0	1758	1525	1810	10	0			
Grp Volume(v), veh/h	485	207	0	0	521	0	182	0	0			
Grp Sat Flow(s),veh/h/ln	1661	1716	0	0	1758	1525	1820	0	0			
Q Serve(g_s), s	9.0	8.5	0.0	0.0	16.9	0.0	8.7	0.0	0.0			
Cycle Q Clear(g_c), s	9.0	8.5	0.0	0.0	16.9	0.0	8.7	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		0.00			
Lane Grp Cap(c), veh/h	642	1299	0	0	975		240	0				
V/C Ratio(X)	0.76	0.16	0.00	0.00	0.53		0.76	0.00				
Avail Cap(c_a), veh/h	786	1299	0	0	975		364	0				
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.84	0.84	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	11.1	11.4	0.0	0.0	12.7	0.0	37.7	0.0	0.0			
Incr Delay (d2), s/veh	2.8	0.2	0.0	0.0	2.1	0.0	4.9	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.3	2.9	0.0	0.0	6.3	0.0	4.1	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	13.9	11.6	0.0	0.0	14.8	0.0	42.6	0.0	6.0			
LnGrp LOS	B	B	A	A	B		D	A	A			
Approach Vol, veh/h		692			521	A		303	A			
Approach Delay, s/veh		13.2			14.8			28.0				
Approach LOS		B			B			C				

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	73.1	16.9	18.2	54.9
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	61.0	17.0	20.0	35.0
Max Q Clear Time (g_c+I1), s	10.5	10.7	11.0	18.9
Green Ext Time (p_c), s	0.1	0.3	1.3	0.3

Intersection Summary	
HCM 6th Ctrl Delay	16.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	190	74	212	413	74	142	97	287	147	50	172
Future Volume (veh/h)	117	190	74	212	413	74	142	97	287	147	50	172
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1921	1864	1892	1697	1655	1669	1795	1837	1837	1794	1866	1766
Adj Flow Rate, veh/h	139	226	73	252	492	20	169	115	286	175	60	188
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	6	4	1	4	3	3	0	0	0	0	2
Cap, veh/h	342	511	165	472	648	553	334	107	266	232	89	278
Arrive On Green	0.08	0.38	0.38	0.09	0.39	0.39	0.09	0.23	0.23	0.09	0.22	0.22
Sat Flow, veh/h	1829	1349	436	1616	1655	1414	1709	467	1161	1709	397	1245
Grp Volume(v), veh/h	139	0	299	252	492	20	169	0	401	175	0	248
Grp Sat Flow(s),veh/h/ln	1829	0	1785	1616	1655	1414	1709	0	1628	1709	0	1642
Q Serve(g_s), s	4.0	0.0	11.2	8.0	23.2	0.8	6.7	0.0	20.6	7.1	0.0	12.4
Cycle Q Clear(g_c), s	4.0	0.0	11.2	8.0	23.2	0.8	6.7	0.0	20.6	7.1	0.0	12.4
Prop In Lane	1.00		0.24	1.00		1.00	1.00		0.71	1.00		0.76
Lane Grp Cap(c), veh/h	342	0	676	472	648	553	334	0	373	232	0	367
V/C Ratio(X)	0.41	0.00	0.44	0.53	0.76	0.04	0.51	0.00	1.08	0.75	0.00	0.68
Avail Cap(c_a), veh/h	365	0	676	472	648	553	334	0	373	232	0	367
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.6	0.0	20.9	16.8	23.7	16.9	24.3	0.0	34.7	26.0	0.0	32.0
Incr Delay (d2), s/veh	0.8	0.0	2.1	1.2	8.2	0.1	1.2	0.0	68.4	13.1	0.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	4.8	3.1	9.8	0.3	2.8	0.0	15.1	3.6	0.0	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.4	0.0	22.9	18.0	31.9	17.0	25.5	0.0	103.1	39.1	0.0	36.9
LnGrp LOS	B	A	C	B	C	B	C	A	F	D	A	D
Approach Vol, veh/h		438			764			570			423	
Approach Delay, s/veh		21.5			26.9			80.1			37.8	
Approach LOS		C			C			F			D	

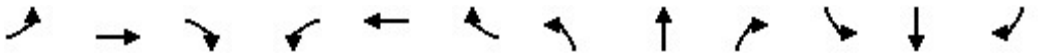
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	39.5	12.7	24.5	12.2	40.6	12.2	25.0
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 7	33.1	* 7.5	18.9	* 7	33.1	* 7	19.6
Max Q Clear Time (g_c+I1), s	10.0	13.2	8.7	14.4	6.0	25.2	9.1	22.6
Green Ext Time (p_c), s	0.0	2.8	0.0	0.3	0.0	3.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	41.7
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



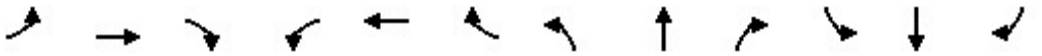
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	504	122	47	653	0	0	0	0	165	0	187
Future Volume (veh/h)	0	504	122	47	653	0	0	0	0	165	0	187
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1744	1758	1772	1758	0				1832	1950	1832
Adj Flow Rate, veh/h	0	573	0	53	742	0				188	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	4	3	2	3	0				3	0	3
Cap, veh/h	0	1122		527	1315	0				251	0	
Arrive On Green	0.00	0.64	0.00	0.04	0.75	0.00				0.14	0.00	0.00
Sat Flow, veh/h	0	1744	1490	1688	1758	0				1857	0	0
Grp Volume(v), veh/h	0	573	0	53	742	0				188	0	0
Grp Sat Flow(s),veh/h/ln	0	1744	1490	1688	1758	0				1857	0	0
Q Serve(g_s), s	0.0	15.7	0.0	0.8	16.6	0.0				8.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	15.7	0.0	0.8	16.6	0.0				8.8	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1122		527	1315	0				251	0	
V/C Ratio(X)	0.00	0.51		0.10	0.56	0.00				0.75	0.00	
Avail Cap(c_a), veh/h	0	1122		603	1315	0				516	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.55	0.55	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.5	0.0	5.8	4.9	0.0				37.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.7	0.0	0.0	1.0	0.0				4.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.3	0.0	0.2	4.1	0.0				4.2	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	10.2	0.0	5.8	5.9	0.0				41.9	0.0	6.0
LnGrp LOS	A	B		A	A	A				D	A	A
Approach Vol, veh/h		573	A		795						400	A
Approach Delay, s/veh		10.2			5.9						22.9	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.4	63.4		17.2		72.8
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	40.0		24.0		53.5
Max Q Clear Time (g_c+I1), s	2.8	17.7		10.8		18.6
Green Ext Time (p_c), s	0.0	0.3		0.5		0.4

Intersection Summary	
HCM 6th Ctrl Delay	11.1
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



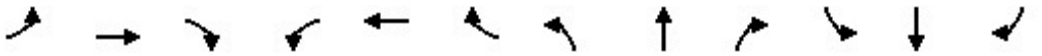
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	467	205	0	0	475	271	196	1	110	0	0	0
Future Volume (veh/h)	467	205	0	0	475	271	196	1	110	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1772	1716	0	0	1772	1800	1752	1911	1823			
Adj Flow Rate, veh/h	513	225	0	0	522	0	215	1	0			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	6	0	0	2	0	6	0	1			
Cap, veh/h	620	1266	0	0	923		273	1				
Arrive On Green	0.05	0.24	0.00	0.00	0.52	0.00	0.15	0.15	0.00			
Sat Flow, veh/h	1688	1716	0	0	1772	1525	1812	8	0			
Grp Volume(v), veh/h	513	225	0	0	522	0	216	0	0			
Grp Sat Flow(s),veh/h/ln	1688	1716	0	0	1772	1525	1820	0	0			
Q Serve(g_s), s	10.1	9.3	0.0	0.0	18.0	0.0	10.3	0.0	0.0			
Cycle Q Clear(g_c), s	10.1	9.3	0.0	0.0	18.0	0.0	10.3	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	620	1266	0	0	923		274	0				
V/C Ratio(X)	0.83	0.18	0.00	0.00	0.57		0.79	0.00				
Avail Cap(c_a), veh/h	779	1266	0	0	923		384	0				
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.78	0.78	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	13.6	12.4	0.0	0.0	14.6	0.0	36.8	0.0	0.0			
Incr Delay (d2), s/veh	4.7	0.2	0.0	0.0	2.5	0.0	7.1	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.1	3.4	0.0	0.0	7.0	0.0	5.0	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	18.3	12.7	0.0	0.0	17.2	0.0	43.9	0.0	6.0			
LnGrp LOS	B	B	A	A	B		D	A	A			
Approach Vol, veh/h		738			522	A		337	A			
Approach Delay, s/veh		16.6			17.2			30.3				
Approach LOS		B			B			C				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		71.4		18.6	19.6	51.9			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		60.0		18.0	22.0	32.0			
Max Q Clear Time (g_c+I1), s		11.3		12.3	12.1	20.0			
Green Ext Time (p_c), s		0.1		0.3	1.4	0.2			

Intersection Summary	
HCM 6th Ctrl Delay	19.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	196	75	212	444	74	149	97	287	147	50	175
Future Volume (veh/h)	118	196	75	212	444	74	149	97	287	147	50	175
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1921	1864	1892	1697	1655	1669	1795	1837	1837	1794	1866	1766
Adj Flow Rate, veh/h	140	233	74	252	529	20	177	115	286	175	60	178
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.90
Percent Heavy Veh, %	2	6	4	1	4	3	3	0	0	0	0	2
Cap, veh/h	299	685	741	494	627	662	355	112	277	232	97	287
Arrive On Green	0.08	0.37	0.37	0.09	0.38	0.38	0.09	0.24	0.24	0.09	0.23	0.23
Sat Flow, veh/h	1829	1864	1604	1616	1655	1414	1709	467	1161	1709	415	1230
Grp Volume(v), veh/h	140	233	74	252	529	20	177	0	401	175	0	238
Grp Sat Flow(s),veh/h/ln	1829	1864	1604	1616	1655	1414	1709	0	1628	1709	0	1645
Q Serve(g_s), s	4.1	8.1	2.3	8.0	26.3	0.7	7.0	0.0	21.5	7.0	0.0	11.7
Cycle Q Clear(g_c), s	4.1	8.1	2.3	8.0	26.3	0.7	7.0	0.0	21.5	7.0	0.0	11.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.71	1.00		0.75
Lane Grp Cap(c), veh/h	299	685	741	494	627	662	355	0	389	232	0	384
V/C Ratio(X)	0.47	0.34	0.10	0.51	0.84	0.03	0.50	0.00	1.03	0.75	0.00	0.62
Avail Cap(c_a), veh/h	320	685	741	494	627	662	355	0	389	232	0	384
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.2	20.6	13.6	16.9	25.5	12.9	23.6	0.0	34.3	25.5	0.0	30.9
Incr Delay (d2), s/veh	1.1	1.3	0.3	0.9	13.0	0.1	1.1	0.0	53.8	13.1	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.6	0.9	3.2	11.7	0.2	2.9	0.0	14.2	3.5	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.3	21.9	13.9	17.8	38.5	13.0	24.7	0.0	88.1	38.6	0.0	34.0
LnGrp LOS	C	C	B	B	D	B	C	A	F	D	A	C
Approach Vol, veh/h		447			801			578			413	
Approach Delay, s/veh		20.1			31.4			68.7			35.9	
Approach LOS		C			C			E			D	

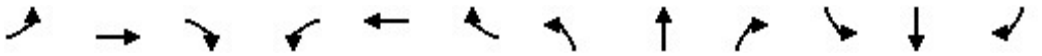
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	38.5	13.2	25.5	11.8	39.5	12.7	26.0
Change Period (Y+Rc), s	* 5.8	6.4	* 5.7	5.5	* 5.8	6.4	* 5.7	5.5
Max Green Setting (Gmax), s	* 7	32.1	* 7.5	20.0	* 7	32.1	* 7	20.5
Max Q Clear Time (g_c+I1), s	10.0	10.1	9.0	13.7	6.1	28.3	9.0	23.5
Green Ext Time (p_c), s	0.0	2.9	0.0	0.4	0.0	1.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	39.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



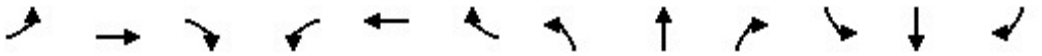
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	509	123	47	677	0	0	0	0	165	0	194
Future Volume (veh/h)	0	509	123	47	677	0	0	0	0	165	0	194
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1744	1758	1772	1758	0				1832	1950	1832
Adj Flow Rate, veh/h	0	578	0	53	769	0				188	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	4	3	2	3	0				3	0	3
Cap, veh/h	0	1122		523	1315	0				251	0	
Arrive On Green	0.00	0.64	0.00	0.01	0.25	0.00				0.14	0.00	0.00
Sat Flow, veh/h	0	1744	1490	1688	1758	0				1857	0	0
Grp Volume(v), veh/h	0	578	0	53	769	0				188	0	0
Grp Sat Flow(s),veh/h/ln	0	1744	1490	1688	1758	0				1857	0	0
Q Serve(g_s), s	0.0	15.9	0.0	0.9	34.7	0.0				8.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	15.9	0.0	0.9	34.7	0.0				8.8	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1122		523	1315	0				251	0	
V/C Ratio(X)	0.00	0.52		0.10	0.58	0.00				0.75	0.00	
Avail Cap(c_a), veh/h	0	1122		599	1315	0				516	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.43	0.43	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.6	0.0	6.0	21.6	0.0				37.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.7	0.0	0.0	0.8	0.0				4.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.3	0.0	0.2	16.3	0.0				4.2	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	10.3	0.0	6.1	22.4	0.0				41.9	0.0	6.0
LnGrp LOS	A	B		A	C	A				D	A	A
Approach Vol, veh/h		578	A		822						408	A
Approach Delay, s/veh		10.3			21.4						22.6	
Approach LOS		B			C						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.4	63.4		17.2		72.8
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	40.0		24.0		53.5
Max Q Clear Time (g_c+I1), s	2.9	17.9		10.8		36.7
Green Ext Time (p_c), s	0.0	0.3		0.5		0.5

Intersection Summary	
HCM 6th Ctrl Delay	18.1
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	471	206	0	0	492	271	203	1	110	0	0	0
Future Volume (veh/h)	471	206	0	0	492	271	203	1	110	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1772	1716	0	0	1772	1800	1752	1911	1823			
Adj Flow Rate, veh/h	518	226	0	0	541	0	223	1	0			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	6	0	0	2	0	6	0	1			
Cap, veh/h	623	1259	0	0	842		281	1				
Arrive On Green	0.34	1.00	0.00	0.00	0.48	0.00	0.16	0.16	0.00			
Sat Flow, veh/h	1688	1716	0	0	1772	1525	1812	8	0			
Grp Volume(v), veh/h	518	226	0	0	541	0	224	0	0			
Grp Sat Flow(s),veh/h/ln	1688	1716	0	0	1772	1525	1820	0	0			
Q Serve(g_s), s	14.1	0.0	0.0	0.0	20.8	0.0	10.7	0.0	0.0			
Cycle Q Clear(g_c), s	14.1	0.0	0.0	0.0	20.8	0.0	10.7	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	623	1259	0	0	842		282	0				
V/C Ratio(X)	0.83	0.18	0.00	0.00	0.64		0.79	0.00				
Avail Cap(c_a), veh/h	731	1259	0	0	842		384	0				
HCM Platoon Ratio	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.77	0.77	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	10.1	0.0	0.0	0.0	17.8	0.0	36.6	0.0	0.0			
Incr Delay (d2), s/veh	5.6	0.2	0.0	0.0	3.7	0.0	7.8	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.7	0.1	0.0	0.0	8.5	0.0	5.3	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	15.6	0.2	0.0	0.0	21.6	0.0	44.5	0.0	6.0			
LnGrp LOS	B	A	A	A	C		D	A	A			
Approach Vol, veh/h		744			541	A		345	A			
Approach Delay, s/veh		11.0			21.6			31.0				
Approach LOS		B			C			C				

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	71.0	19.0	23.3	47.8
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	60.0	18.0	23.0	31.0
Max Q Clear Time (g_c+I1), s	2.0	12.7	16.1	22.8
Green Ext Time (p_c), s	0.1	0.3	1.2	0.2

Intersection Summary	
HCM 6th Ctrl Delay	18.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	196	75	212	444	74	149	97	287	147	50	175
Future Volume (veh/h)	118	196	75	212	444	74	149	97	287	147	50	175
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1921	1864	1892	1697	1655	1669	1795	1837	1837	1794	1866	1766
Adj Flow Rate, veh/h	140	233	74	252	529	20	177	115	286	175	60	191
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	6	4	1	4	3	3	0	0	0	0	2
Cap, veh/h	357	1005	311	588	702	732	296	355	493	371	71	227
Arrive On Green	0.08	0.38	0.38	0.12	0.42	0.42	0.10	0.19	0.19	0.09	0.18	0.18
Sat Flow, veh/h	1829	2662	824	1616	1655	1414	1709	1837	1557	1709	392	1249
Grp Volume(v), veh/h	140	153	154	252	529	20	177	115	286	175	0	251
Grp Sat Flow(s),veh/h/ln	1829	1771	1715	1616	1655	1414	1709	1837	1557	1709	0	1641
Q Serve(g_s), s	4.1	5.3	5.5	8.0	24.3	0.6	7.4	4.8	13.8	7.4	0.0	13.3
Cycle Q Clear(g_c), s	4.1	5.3	5.5	8.0	24.3	0.6	7.4	4.8	13.8	7.4	0.0	13.3
Prop In Lane	1.00		0.48	1.00		1.00	1.00		1.00	1.00		0.76
Lane Grp Cap(c), veh/h	357	669	648	588	702	732	296	355	493	371	0	298
V/C Ratio(X)	0.39	0.23	0.24	0.43	0.75	0.03	0.60	0.32	0.58	0.47	0.00	0.84
Avail Cap(c_a), veh/h	384	669	648	621	702	732	296	390	523	371	0	312
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.2	19.1	19.2	12.7	21.9	10.6	26.7	31.3	25.7	26.4	0.0	35.6
Incr Delay (d2), s/veh	0.7	0.8	0.9	0.5	7.3	0.1	3.3	0.5	1.4	0.9	0.0	17.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	2.2	2.2	2.7	10.0	0.2	3.3	2.2	5.2	3.0	0.0	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.9	19.9	20.0	13.2	29.2	10.7	30.1	31.8	27.2	27.4	0.0	53.3
LnGrp LOS	B	B	C	B	C	B	C	C	C	C	A	D
Approach Vol, veh/h		447			801			578			426	
Approach Delay, s/veh		19.3			23.7			29.0			42.6	
Approach LOS		B			C			C			D	

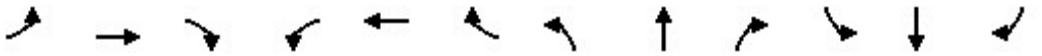
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.8	39.4	14.0	20.8	11.6	43.6	13.0	21.8
Change Period (Y+Rc), s	5.7	6.4	5.6	* 5.4	5.7	6.4	5.6	* 5.4
Max Green Setting (Gmax), s	12.0	29.4	8.4	* 16	7.3	34.1	7.4	* 18
Max Q Clear Time (g_c+I1), s	10.0	7.5	9.4	15.3	6.1	26.3	9.4	15.8
Green Ext Time (p_c), s	0.2	2.9	0.0	0.1	0.0	3.1	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	27.8
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



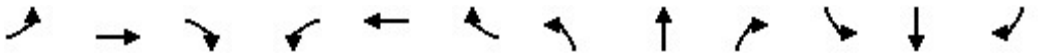
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	509	123	47	677	0	0	0	0	165	0	194
Future Volume (veh/h)	0	509	123	47	677	0	0	0	0	165	0	194
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1744	1758	1772	1758	0				1832	1950	1832
Adj Flow Rate, veh/h	0	578	0	53	769	0				188	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	4	3	2	3	0				3	0	3
Cap, veh/h	0	1599		579	1319	0				247	0	
Arrive On Green	0.00	0.65	0.00	0.09	1.00	0.00				0.13	0.00	0.00
Sat Flow, veh/h	0	2982	1490	1688	1758	0				1857	0	0
Grp Volume(v), veh/h	0	578	0	53	769	0				188	0	0
Grp Sat Flow(s),veh/h/ln	0	1238	1490	1688	1758	0				1857	0	0
Q Serve(g_s), s	0.0	9.7	0.0	0.8	0.0	0.0				8.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	9.7	0.0	0.8	0.0	0.0				8.8	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1599		579	1319	0				247	0	
V/C Ratio(X)	0.00	0.36		0.09	0.58	0.00				0.76	0.00	
Avail Cap(c_a), veh/h	0	1599		665	1319	0				351	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.51	0.51	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	7.4	0.0	4.5	0.0	0.0				37.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.0	1.0	0.0				6.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.2	0.0	0.2	0.4	0.0				4.3	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	8.0	0.0	4.5	1.0	0.0				43.7	0.0	6.0
LnGrp LOS	A	A		A	A	A				D	A	A
Approach Vol, veh/h		578	A		822						408	A
Approach Delay, s/veh		8.0			1.2						23.4	
Approach LOS		A			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.4	63.6		17.0		73.0
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.5	47.5		16.0		61.5
Max Q Clear Time (g_c+I1), s	2.8	11.7		10.8		2.0
Green Ext Time (p_c), s	0.0	0.5		0.3		0.5

Intersection Summary	
HCM 6th Ctrl Delay	8.4
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



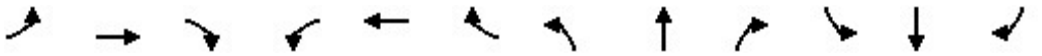
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	471	206	0	0	492	271	203	1	110	0	0	0
Future Volume (veh/h)	471	206	0	0	492	271	203	1	110	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1772	1716	0	0	1772	1800	1752	1911	1823			
Adj Flow Rate, veh/h	518	226	0	0	541	0	223	1	0			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	6	0	0	2	0	6	0	1			
Cap, veh/h	623	1260	0	0	845		280	1				
Arrive On Green	0.34	1.00	0.00	0.00	0.48	0.00	0.15	0.15	0.00			
Sat Flow, veh/h	1688	1716	0	0	1772	1525	1812	8	0			
Grp Volume(v), veh/h	518	226	0	0	541	0	224	0	0			
Grp Sat Flow(s),veh/h/ln	1688	1716	0	0	1772	1525	1820	0	0			
Q Serve(g_s), s	14.1	0.0	0.0	0.0	20.7	0.0	10.7	0.0	0.0			
Cycle Q Clear(g_c), s	14.1	0.0	0.0	0.0	20.7	0.0	10.7	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	623	1260	0	0	845		281	0				
V/C Ratio(X)	0.83	0.18	0.00	0.00	0.64		0.80	0.00				
Avail Cap(c_a), veh/h	714	1260	0	0	845		364	0				
HCM Platoon Ratio	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.93	0.93	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	10.1	0.0	0.0	0.0	17.7	0.0	36.7	0.0	0.0			
Incr Delay (d2), s/veh	6.9	0.3	0.0	0.0	3.7	0.0	9.0	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.9	0.1	0.0	0.0	8.5	0.0	5.4	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	17.0	0.3	0.0	0.0	21.4	0.0	45.7	0.0	6.0			
LnGrp LOS	B	A	A	A	C		D	A	A			
Approach Vol, veh/h		744			541	A		345	A			
Approach Delay, s/veh		11.9			21.4			31.8				
Approach LOS		B			C			C				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		71.1		18.9	23.1	47.9			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		61.0		17.0	22.0	33.0			
Max Q Clear Time (g_c+I1), s		2.0		12.7	16.1	22.7			
Green Ext Time (p_c), s		0.1		0.3	1.1	0.3			

Intersection Summary		
HCM 6th Ctrl Delay	19.3	
HCM 6th LOS	B	

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



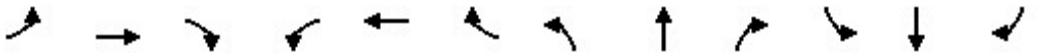
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	278	53	159	543	77	108	78	248	39	39	54
Future Volume (veh/h)	38	278	53	159	543	77	108	78	248	39	39	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1864	1878	1864	1697	1669	1669	1780	1837	1837	1794	1866	1710
Adj Flow Rate, veh/h	45	331	51	189	646	73	129	93	206	46	46	43
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	6	5	6	1	3	3	4	0	0	0	0	6
Cap, veh/h	376	756	117	555	886	751	329	83	184	158	99	92
Arrive On Green	0.04	0.48	0.48	0.12	0.71	0.71	0.10	0.16	0.16	0.04	0.11	0.11
Sat Flow, veh/h	1775	1589	245	1616	1669	1414	1696	508	1126	1709	887	830
Grp Volume(v), veh/h	45	0	382	189	646	73	129	0	299	46	0	89
Grp Sat Flow(s),veh/h/ln	1775	0	1834	1616	1669	1414	1696	0	1635	1709	0	1717
Q Serve(g_s), s	1.1	0.0	11.7	4.8	19.9	1.4	5.4	0.0	13.9	2.0	0.0	4.1
Cycle Q Clear(g_c), s	1.1	0.0	11.7	4.8	19.9	1.4	5.4	0.0	13.9	2.0	0.0	4.1
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.69	1.00		0.48
Lane Grp Cap(c), veh/h	376	0	873	555	886	751	329	0	267	158	0	191
V/C Ratio(X)	0.12	0.00	0.44	0.34	0.73	0.10	0.39	0.00	1.12	0.29	0.00	0.47
Avail Cap(c_a), veh/h	480	0	873	561	886	751	369	0	267	246	0	238
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.76	0.76	0.76	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.9	0.0	14.7	9.3	8.8	6.1	27.5	0.0	35.6	31.8	0.0	35.4
Incr Delay (d2), s/veh	0.1	0.0	1.6	0.3	4.0	0.2	0.8	0.0	90.7	1.0	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	4.7	1.4	5.1	0.4	2.2	0.0	12.2	0.8	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.0	0.0	16.3	9.6	12.8	6.3	28.3	0.0	126.3	32.8	0.0	37.2
LnGrp LOS	B	A	B	A	B	A	C	A	F	C	A	D
Approach Vol, veh/h		427			908			428			135	
Approach Delay, s/veh		15.9			11.6			96.7			35.7	
Approach LOS		B			B			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	45.9	12.3	13.9	8.3	50.5	7.9	18.3
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 7	34.8	* 9.1	10.8	* 7	34.8	* 7	12.9
Max Q Clear Time (g_c+I1), s	6.8	13.7	7.4	6.1	3.1	21.9	4.0	15.9
Green Ext Time (p_c), s	0.0	3.9	0.1	0.1	0.0	6.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	33.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



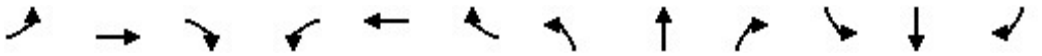
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	473	96	48	619	0	0	0	0	172	0	157
Future Volume (veh/h)	0	473	96	48	619	0	0	0	0	172	0	157
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1744	1758	1772	1758	0				1832	1950	1832
Adj Flow Rate, veh/h	0	538	0	55	703	0				195	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	4	3	2	3	0				3	0	3
Cap, veh/h	0	1090		560	1294	0				261	0	
Arrive On Green	0.00	0.63	0.00	0.09	1.00	0.00				0.14	0.00	0.00
Sat Flow, veh/h	0	1744	1490	1688	1758	0				1857	0	0
Grp Volume(v), veh/h	0	538	0	55	703	0				195	0	0
Grp Sat Flow(s),veh/h/ln	0	1744	1490	1688	1758	0				1857	0	0
Q Serve(g_s), s	0.0	14.2	0.0	0.9	0.0	0.0				8.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	14.2	0.0	0.9	0.0	0.0				8.6	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1090		560	1294	0				261	0	
V/C Ratio(X)	0.00	0.49		0.10	0.54	0.00				0.75	0.00	
Avail Cap(c_a), veh/h	0	1090		641	1294	0				502	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.87	0.00	0.51	0.51	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.6	0.0	5.5	0.0	0.0				35.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.4	0.0	0.0	0.8	0.0				4.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.7	0.0	0.2	0.3	0.0				4.1	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	10.0	0.0	5.5	0.8	0.0				39.3	0.0	6.0
LnGrp LOS	A	B		A	A	A				D	A	A
Approach Vol, veh/h		538	A		758						373	A
Approach Delay, s/veh		10.0			1.2						23.4	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.4	58.7		16.9		68.1
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	37.0		22.0		50.5
Max Q Clear Time (g_c+I1), s	2.9	16.2		10.6		2.0
Green Ext Time (p_c), s	0.0	0.3		0.5		0.4

Intersection Summary	
HCM 6th Ctrl Delay	9.0
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



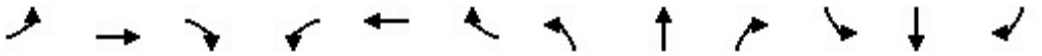
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	454	194	0	0	474	281	164	1	114	0	0	0
Future Volume (veh/h)	454	194	0	0	474	281	164	1	114	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1744	1716	0	0	1758	1800	1724	1911	1823			
Adj Flow Rate, veh/h	499	213	0	0	521	0	180	1	0			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	4	6	0	0	3	0	8	0	1			
Cap, veh/h	654	1287	0	0	874		240	1				
Arrive On Green	0.32	1.00	0.00	0.00	0.50	0.00	0.13	0.13	0.00			
Sat Flow, veh/h	1661	1716	0	0	1758	1525	1810	10	0			
Grp Volume(v), veh/h	499	213	0	0	521	0	181	0	0			
Grp Sat Flow(s),veh/h/ln	1661	1716	0	0	1758	1525	1820	0	0			
Q Serve(g_s), s	12.3	0.0	0.0	0.0	18.0	0.0	8.1	0.0	0.0			
Cycle Q Clear(g_c), s	12.3	0.0	0.0	0.0	18.0	0.0	8.1	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		0.00			
Lane Grp Cap(c), veh/h	654	1287	0	0	874		241	0				
V/C Ratio(X)	0.76	0.17	0.00	0.00	0.60		0.75	0.00				
Avail Cap(c_a), veh/h	781	1287	0	0	874		364	0				
HCM Platoon Ratio	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.82	0.82	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	8.2	0.0	0.0	0.0	15.3	0.0	35.5	0.0	0.0			
Incr Delay (d2), s/veh	3.1	0.2	0.0	0.0	3.0	0.0	4.7	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.5	0.1	0.0	0.0	7.0	0.0	3.9	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	11.3	0.2	0.0	0.0	18.3	0.0	40.2	0.0	6.0			
LnGrp LOS	B	A	A	A	B		D	A	A			
Approach Vol, veh/h		712			521	A		306	A			
Approach Delay, s/veh		8.0			18.3			26.2				
Approach LOS		A			B			C				

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	68.7	16.3	21.5	47.3
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	57.0	16.0	22.0	29.0
Max Q Clear Time (g_c+I1), s	2.0	10.1	14.3	20.0
Green Ext Time (p_c), s	0.1	0.3	1.2	0.2

Intersection Summary	
HCM 6th Ctrl Delay	15.1
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	284	54	159	574	77	115	78	248	39	39	57
Future Volume (veh/h)	39	284	54	159	574	77	115	78	248	39	39	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1864	1878	1864	1697	1669	1669	1780	1837	1837	1794	1866	1710
Adj Flow Rate, veh/h	46	338	52	189	683	73	137	93	206	46	46	47
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	6	5	6	1	3	3	4	0	0	0	0	6
Cap, veh/h	516	926	928	593	912	834	301	74	164	159	80	82
Arrive On Green	0.04	0.49	0.49	0.18	1.00	1.00	0.09	0.15	0.15	0.04	0.10	0.10
Sat Flow, veh/h	1775	1878	1579	1616	1669	1414	1696	508	1126	1709	846	864
Grp Volume(v), veh/h	46	338	52	189	683	73	137	0	299	46	0	93
Grp Sat Flow(s),veh/h/ln	1775	1878	1579	1616	1669	1414	1696	0	1635	1709	0	1711
Q Serve(g_s), s	1.1	9.5	1.2	4.6	0.0	0.0	5.9	0.0	12.4	2.0	0.0	4.4
Cycle Q Clear(g_c), s	1.1	9.5	1.2	4.6	0.0	0.0	5.9	0.0	12.4	2.0	0.0	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.69	1.00		0.51
Lane Grp Cap(c), veh/h	516	926	928	593	912	834	301	0	238	159	0	163
V/C Ratio(X)	0.09	0.36	0.06	0.32	0.75	0.09	0.46	0.00	1.25	0.29	0.00	0.57
Avail Cap(c_a), veh/h	619	926	928	600	912	834	301	0	238	246	0	250
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.73	0.73	0.73	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.7	13.3	7.5	7.7	0.0	0.0	29.2	0.0	36.3	32.8	0.0	36.8
Incr Delay (d2), s/veh	0.1	1.1	0.1	0.2	4.1	0.2	1.1	0.0	143.9	1.0	0.0	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.8	0.4	1.2	1.0	0.0	2.5	0.0	14.4	0.9	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.7	14.4	7.6	7.9	4.1	0.2	30.3	0.0	180.2	33.8	0.0	40.0
LnGrp LOS	A	B	A	A	A	A	C	A	F	C	A	D
Approach Vol, veh/h		436			945			436			139	
Approach Delay, s/veh		13.1			4.6			133.1			37.9	
Approach LOS		B			A			F			D	

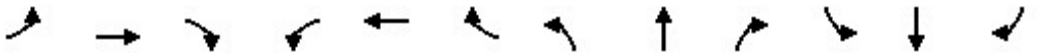
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.4	47.3	12.7	12.6	7.8	51.9	8.4	16.9
Change Period (Y+Rc), s	* 5.8	6.4	* 5.7	5.5	* 5.8	6.4	* 5.7	5.5
Max Green Setting (Gmax), s	* 7	36.2	* 7	11.4	* 7	36.2	* 7	11.4
Max Q Clear Time (g_c+I1), s	6.6	11.5	7.9	6.4	3.1	2.0	4.0	14.4
Green Ext Time (p_c), s	0.0	4.1	0.0	0.1	0.0	10.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	37.5
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



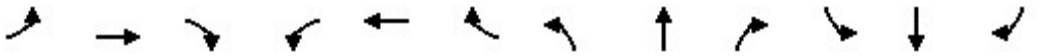
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	478	97	48	643	0	0	0	0	172	0	164
Future Volume (veh/h)	0	478	97	48	643	0	0	0	0	172	0	164
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1744	1758	1772	1758	0				1832	1950	1832
Adj Flow Rate, veh/h	0	543	0	55	731	0				195	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	4	3	2	3	0				3	0	3
Cap, veh/h	0	1090		556	1294	0				261	0	
Arrive On Green	0.00	0.63	0.00	0.02	0.24	0.00				0.14	0.00	0.00
Sat Flow, veh/h	0	1744	1490	1688	1758	0				1857	0	0
Grp Volume(v), veh/h	0	543	0	55	731	0				195	0	0
Grp Sat Flow(s),veh/h/ln	0	1744	1490	1688	1758	0				1857	0	0
Q Serve(g_s), s	0.0	14.4	0.0	0.9	31.0	0.0				8.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	14.4	0.0	0.9	31.0	0.0				8.6	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1090		556	1294	0				261	0	
V/C Ratio(X)	0.00	0.50		0.10	0.57	0.00				0.75	0.00	
Avail Cap(c_a), veh/h	0	1090		637	1294	0				502	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.92	0.00	0.54	0.54	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.7	0.0	6.0	20.2	0.0				35.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.5	0.0	0.0	1.0	0.0				4.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.8	0.0	0.2	14.6	0.0				4.1	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	10.2	0.0	6.0	21.2	0.0				39.3	0.0	6.0
LnGrp LOS	A	B		A	C	A				D	A	A
Approach Vol, veh/h		543	A		786						381	A
Approach Delay, s/veh		10.2			20.1						23.1	
Approach LOS		B			C						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.4	58.7		16.9		68.1
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	37.0		22.0		50.5
Max Q Clear Time (g_c+I1), s	2.9	16.4		10.6		33.0
Green Ext Time (p_c), s	0.0	0.3		0.5		0.4

Intersection Summary	
HCM 6th Ctrl Delay	17.6
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	458	195	0	0	491	281	171	1	114	0	0	0
Future Volume (veh/h)	458	195	0	0	491	281	171	1	114	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1744	1716	0	0	1758	1800	1724	1911	1823			
Adj Flow Rate, veh/h	503	214	0	0	540	0	188	1	0			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	4	6	0	0	3	0	8	0	1			
Cap, veh/h	636	1280	0	0	864		247	1				
Arrive On Green	0.33	1.00	0.00	0.00	0.49	0.00	0.14	0.14	0.00			
Sat Flow, veh/h	1661	1716	0	0	1758	1525	1811	10	0			
Grp Volume(v), veh/h	503	214	0	0	540	0	189	0	0			
Grp Sat Flow(s),veh/h/ln	1661	1716	0	0	1758	1525	1820	0	0			
Q Serve(g_s), s	12.6	0.0	0.0	0.0	19.2	0.0	8.5	0.0	0.0			
Cycle Q Clear(g_c), s	12.6	0.0	0.0	0.0	19.2	0.0	8.5	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		0.00			
Lane Grp Cap(c), veh/h	636	1280	0	0	864		249	0				
V/C Ratio(X)	0.79	0.17	0.00	0.00	0.62		0.76	0.00				
Avail Cap(c_a), veh/h	722	1280	0	0	864		343	0				
HCM Platoon Ratio	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.81	0.81	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	8.9	0.0	0.0	0.0	15.8	0.0	35.4	0.0	0.0			
Incr Delay (d2), s/veh	4.4	0.2	0.0	0.0	3.4	0.0	6.4	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.9	0.1	0.0	0.0	7.6	0.0	4.1	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	13.2	0.2	0.0	0.0	19.2	0.0	41.8	0.0	6.0			
LnGrp LOS	B	A	A	A	B		D	A	A			
Approach Vol, veh/h		717			540	A		314	A			
Approach Delay, s/veh		9.4			19.2			27.5				
Approach LOS		A			B			C				

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		68.4		16.6	21.6	46.8						
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0						
Max Green Setting (Gmax), s		58.0		15.0	20.0	32.0						
Max Q Clear Time (g_c+I1), s		2.0		10.5	14.6	21.2						
Green Ext Time (p_c), s		0.1		0.2	1.0	0.3						

Intersection Summary												
HCM 6th Ctrl Delay			16.4									
HCM 6th LOS			B									

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	200	76	218	432	77	145	100	295	148	51	174
Future Volume (veh/h)	118	200	76	218	432	77	145	100	295	148	51	174
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1921	1864	1892	1697	1655	1669	1795	1837	1837	1794	1866	1766
Adj Flow Rate, veh/h	140	238	75	260	514	24	173	119	295	176	61	190
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	6	4	1	4	3	3	0	0	0	0	2
Cap, veh/h	324	515	162	463	647	553	329	107	266	232	91	285
Arrive On Green	0.08	0.38	0.38	0.09	0.39	0.39	0.09	0.23	0.23	0.09	0.23	0.23
Sat Flow, veh/h	1829	1359	428	1616	1655	1414	1709	468	1160	1709	399	1243
Grp Volume(v), veh/h	140	0	313	260	514	24	173	0	414	176	0	251
Grp Sat Flow(s),veh/h/ln	1829	0	1787	1616	1655	1414	1709	0	1628	1709	0	1642
Q Serve(g_s), s	4.1	0.0	11.9	8.0	24.7	0.9	6.9	0.0	20.6	7.0	0.0	12.5
Cycle Q Clear(g_c), s	4.1	0.0	11.9	8.0	24.7	0.9	6.9	0.0	20.6	7.0	0.0	12.5
Prop In Lane	1.00		0.24	1.00		1.00	1.00		0.71	1.00		0.76
Lane Grp Cap(c), veh/h	324	0	677	463	647	553	329	0	373	232	0	376
V/C Ratio(X)	0.43	0.00	0.46	0.56	0.79	0.04	0.53	0.00	1.11	0.76	0.00	0.67
Avail Cap(c_a), veh/h	346	0	677	463	647	553	329	0	373	232	0	383
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.1	0.0	21.0	17.4	24.2	17.0	24.3	0.0	34.7	25.7	0.0	31.6
Incr Delay (d2), s/veh	0.9	0.0	2.3	1.6	9.7	0.1	1.5	0.0	80.0	13.5	0.0	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	5.1	3.3	10.6	0.3	2.9	0.0	16.3	3.6	0.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.0	0.0	23.3	19.0	33.9	17.1	25.9	0.0	114.7	39.2	0.0	35.9
LnGrp LOS	B	A	C	B	C	B	C	A	F	D	A	D
Approach Vol, veh/h		453			798			587			427	
Approach Delay, s/veh		22.0			28.6			88.5			37.3	
Approach LOS		C			C			F			D	

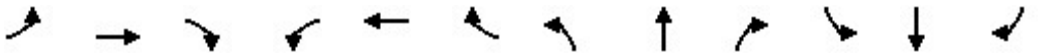
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	39.5	12.2	25.0	12.2	40.6	12.2	25.0
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 7	32.7	* 7	20.0	* 7	32.7	* 7	19.6
Max Q Clear Time (g_c+I1), s	10.0	13.9	8.9	14.5	6.1	26.7	9.0	22.6
Green Ext Time (p_c), s	0.0	2.9	0.0	0.4	0.0	2.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	44.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



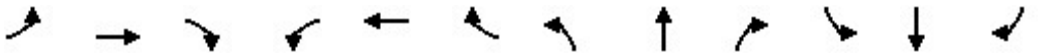
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	521	126	48	675	0	0	0	0	172	0	193
Future Volume (veh/h)	0	521	126	48	675	0	0	0	0	172	0	193
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1744	1758	1772	1758	0				1832	1950	1832
Adj Flow Rate, veh/h	0	592	0	55	767	0				195	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	4	3	2	3	0				3	0	3
Cap, veh/h	0	1113		508	1307	0				259	0	
Arrive On Green	0.00	0.64	0.00	0.04	0.74	0.00				0.14	0.00	0.00
Sat Flow, veh/h	0	1744	1490	1688	1758	0				1857	0	0
Grp Volume(v), veh/h	0	592	0	55	767	0				195	0	0
Grp Sat Flow(s),veh/h/ln	0	1744	1490	1688	1758	0				1857	0	0
Q Serve(g_s), s	0.0	16.7	0.0	0.9	17.9	0.0				9.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	16.7	0.0	0.9	17.9	0.0				9.1	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1113		508	1307	0				259	0	
V/C Ratio(X)	0.00	0.53		0.11	0.59	0.00				0.75	0.00	
Avail Cap(c_a), veh/h	0	1113		584	1307	0				578	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.50	0.50	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.9	0.0	6.1	5.2	0.0				37.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.8	0.0	0.0	1.0	0.0				4.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.7	0.0	0.2	4.5	0.0				4.4	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	10.7	0.0	6.2	6.2	0.0				41.6	0.0	6.0
LnGrp LOS	A	B		A	A	A				D	A	A
Approach Vol, veh/h		592	A		822						414	A
Approach Delay, s/veh		10.7			6.2						22.8	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.5	63.0		17.6		72.4
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	37.0		27.0		50.5
Max Q Clear Time (g_c+I1), s	2.9	18.7		11.1		19.9
Green Ext Time (p_c), s	0.0	0.3		0.6		0.5

Intersection Summary		
HCM 6th Ctrl Delay		11.4
HCM 6th LOS		B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



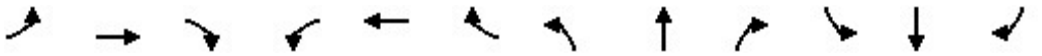
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	484	212	0	0	492	281	202	1	114	0	0	0
Future Volume (veh/h)	484	212	0	0	492	281	202	1	114	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1772	1716	0	0	1772	1800	1752	1911	1823			
Adj Flow Rate, veh/h	532	233	0	0	541	0	222	1	0			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	6	0	0	2	0	6	0	1			
Cap, veh/h	607	1261	0	0	904		279	1				
Arrive On Green	0.06	0.24	0.00	0.00	0.51	0.00	0.15	0.15	0.00			
Sat Flow, veh/h	1688	1716	0	0	1772	1525	1812	8	0			
Grp Volume(v), veh/h	532	233	0	0	541	0	223	0	0			
Grp Sat Flow(s),veh/h/ln	1688	1716	0	0	1772	1525	1820	0	0			
Q Serve(g_s), s	10.8	9.7	0.0	0.0	19.4	0.0	10.6	0.0	0.0			
Cycle Q Clear(g_c), s	10.8	9.7	0.0	0.0	19.4	0.0	10.6	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	607	1261	0	0	904		280	0				
V/C Ratio(X)	0.88	0.18	0.00	0.00	0.60		0.80	0.00				
Avail Cap(c_a), veh/h	752	1261	0	0	904		364	0				
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.70	0.70	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	14.9	12.7	0.0	0.0	15.6	0.0	36.7	0.0	0.0			
Incr Delay (d2), s/veh	7.1	0.2	0.0	0.0	2.9	0.0	8.9	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	7.2	3.7	0.0	0.0	7.7	0.0	5.3	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	22.0	12.9	0.0	0.0	18.5	0.0	45.6	0.0	6.0			
LnGrp LOS	C	B	A	A	B		D	A	A			
Approach Vol, veh/h		765			541	A		348	A			
Approach Delay, s/veh		19.2			18.5			31.4				
Approach LOS		B			B			C				

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	71.1	18.9	20.2	50.9
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	61.0	17.0	22.0	33.0
Max Q Clear Time (g_c+I1), s	11.7	12.6	12.8	21.4
Green Ext Time (p_c), s	0.1	0.3	1.4	0.3

Intersection Summary	
HCM 6th Ctrl Delay	21.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	206	77	218	463	77	152	100	295	148	51	177
Future Volume (veh/h)	119	206	77	218	463	77	152	100	295	148	51	177
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1921	1864	1892	1697	1655	1669	1795	1837	1837	1794	1866	1766
Adj Flow Rate, veh/h	142	245	77	260	551	24	181	119	295	176	61	194
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	6	4	1	4	3	3	0	0	0	0	2
Cap, veh/h	282	685	741	485	626	661	341	112	277	232	92	291
Arrive On Green	0.08	0.37	0.37	0.09	0.38	0.38	0.09	0.24	0.24	0.09	0.23	0.23
Sat Flow, veh/h	1829	1864	1604	1616	1655	1414	1709	468	1160	1709	393	1249
Grp Volume(v), veh/h	142	245	77	260	551	24	181	0	414	176	0	255
Grp Sat Flow(s),veh/h/ln	1829	1864	1604	1616	1655	1414	1709	0	1628	1709	0	1641
Q Serve(g_s), s	4.2	8.6	2.4	8.0	27.9	0.8	7.2	0.0	21.5	7.0	0.0	12.7
Cycle Q Clear(g_c), s	4.2	8.6	2.4	8.0	27.9	0.8	7.2	0.0	21.5	7.0	0.0	12.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.71	1.00		0.76
Lane Grp Cap(c), veh/h	282	685	741	485	626	661	341	0	389	232	0	383
V/C Ratio(X)	0.50	0.36	0.10	0.54	0.88	0.04	0.53	0.00	1.06	0.76	0.00	0.67
Avail Cap(c_a), veh/h	301	685	741	485	626	661	341	0	389	232	0	383
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.8	20.7	13.7	17.4	26.1	13.0	23.8	0.0	34.3	25.5	0.0	31.3
Incr Delay (d2), s/veh	1.4	1.5	0.3	1.2	16.2	0.1	1.6	0.0	63.7	13.5	0.0	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.8	0.9	3.3	12.9	0.3	3.0	0.0	15.2	3.6	0.0	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.2	22.2	14.0	18.6	42.3	13.1	25.4	0.0	98.0	39.0	0.0	35.6
LnGrp LOS	C	C	B	B	D	B	C	A	F	D	A	D
Approach Vol, veh/h		464			835			595			431	
Approach Delay, s/veh		20.5			34.1			75.9			37.0	
Approach LOS		C			C			E			D	

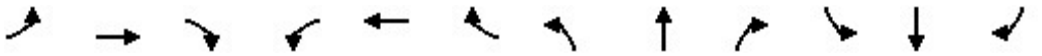
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	38.5	13.2	25.5	11.8	39.5	12.7	26.0
Change Period (Y+Rc), s	* 5.8	6.4	* 5.7	5.5	* 5.8	6.4	* 5.7	5.5
Max Green Setting (Gmax), s	* 7	32.1	* 7.5	20.0	* 7	32.1	* 7	20.5
Max Q Clear Time (g_c+I1), s	10.0	10.6	9.2	14.7	6.2	29.9	9.0	23.5
Green Ext Time (p_c), s	0.0	3.1	0.0	0.4	0.0	1.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	42.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



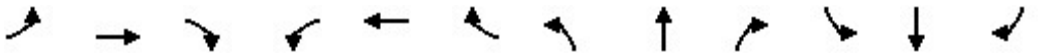
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	526	127	48	699	0	0	0	0	172	0	200
Future Volume (veh/h)	0	526	127	48	699	0	0	0	0	172	0	200
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1744	1758	1772	1758	0				1832	1950	1832
Adj Flow Rate, veh/h	0	598	0	55	794	0				195	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	4	3	2	3	0				3	0	3
Cap, veh/h	0	1114		505	1308	0				258	0	
Arrive On Green	0.00	0.64	0.00	0.03	0.50	0.00				0.14	0.00	0.00
Sat Flow, veh/h	0	1744	1490	1688	1758	0				1857	0	0
Grp Volume(v), veh/h	0	598	0	55	794	0				195	0	0
Grp Sat Flow(s),veh/h/ln	0	1744	1490	1688	1758	0				1857	0	0
Q Serve(g_s), s	0.0	17.0	0.0	0.9	29.2	0.0				9.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	17.0	0.0	0.9	29.2	0.0				9.1	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1114		505	1308	0				258	0	
V/C Ratio(X)	0.00	0.54		0.11	0.61	0.00				0.76	0.00	
Avail Cap(c_a), veh/h	0	1114		580	1308	0				516	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.33	0.33	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.9	0.0	6.3	13.1	0.0				37.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.9	0.0	0.0	0.7	0.0				4.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.8	0.0	0.2	12.0	0.0				4.4	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	10.8	0.0	6.3	13.8	0.0				41.7	0.0	6.0
LnGrp LOS	A	B		A	B	A				D	A	A
Approach Vol, veh/h		598	A		849						422	A
Approach Delay, s/veh		10.8			13.3						22.5	
Approach LOS		B			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.5	63.0		17.5		72.5
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	40.0		24.0		53.5
Max Q Clear Time (g_c+I1), s	2.9	19.0		11.1		31.2
Green Ext Time (p_c), s	0.0	0.3		0.5		0.5

Intersection Summary	
HCM 6th Ctrl Delay	14.6
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	488	213	0	0	509	281	209	1	114	0	0	0
Future Volume (veh/h)	488	213	0	0	509	281	209	1	114	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1772	1716	0	0	1772	1800	1752	1911	1823			
Adj Flow Rate, veh/h	536	234	0	0	559	0	230	1	0			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	6	0	0	2	0	6	0	1			
Cap, veh/h	607	1253	0	0	832		288	1				
Arrive On Green	0.07	0.24	0.00	0.00	0.47	0.00	0.16	0.16	0.00			
Sat Flow, veh/h	1688	1716	0	0	1772	1525	1812	8	0			
Grp Volume(v), veh/h	536	234	0	0	559	0	231	0	0			
Grp Sat Flow(s),veh/h/ln	1688	1716	0	0	1772	1525	1820	0	0			
Q Serve(g_s), s	14.2	9.8	0.0	0.0	22.0	0.0	11.0	0.0	0.0			
Cycle Q Clear(g_c), s	14.2	9.8	0.0	0.0	22.0	0.0	11.0	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	607	1253	0	0	832		289	0				
V/C Ratio(X)	0.88	0.19	0.00	0.00	0.67		0.80	0.00				
Avail Cap(c_a), veh/h	712	1253	0	0	832		384	0				
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.70	0.70	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	19.8	12.9	0.0	0.0	18.5	0.0	36.5	0.0	0.0			
Incr Delay (d2), s/veh	8.3	0.2	0.0	0.0	4.3	0.0	8.5	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	7.4	3.7	0.0	0.0	9.1	0.0	5.5	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	28.1	13.2	0.0	0.0	22.8	0.0	44.9	0.0	6.0			
LnGrp LOS	C	B	A	A	C		D	A	A			
Approach Vol, veh/h		770			559	A		356	A			
Approach Delay, s/veh		23.5			22.8			31.3				
Approach LOS		C			C			C				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		70.7		19.3	23.4	47.3			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		60.0		18.0	23.0	31.0			
Max Q Clear Time (g_c+I1), s		11.8		13.0	16.2	24.0			
Green Ext Time (p_c), s		0.1		0.3	1.2	0.2			

Intersection Summary		
HCM 6th Ctrl Delay		24.9
HCM 6th LOS		C

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	206	77	218	463	77	152	100	295	148	51	177
Future Volume (veh/h)	119	206	77	218	463	77	152	100	295	148	51	177
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1921	1864	1892	1697	1655	1669	1795	1837	1837	1794	1866	1766
Adj Flow Rate, veh/h	142	245	77	260	551	24	181	119	295	176	61	194
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	6	4	1	4	3	3	0	0	0	0	2
Cap, veh/h	323	957	294	570	678	724	314	362	509	387	72	230
Arrive On Green	0.08	0.36	0.36	0.13	0.41	0.41	0.12	0.20	0.20	0.10	0.18	0.18
Sat Flow, veh/h	1829	2668	819	1616	1655	1414	1709	1837	1557	1709	393	1249
Grp Volume(v), veh/h	142	161	161	260	551	24	181	119	295	176	0	255
Grp Sat Flow(s),veh/h/ln	1829	1771	1716	1616	1655	1414	1709	1837	1557	1709	0	1641
Q Serve(g_s), s	4.3	5.8	6.0	8.5	26.5	0.8	7.5	5.0	14.2	7.4	0.0	13.5
Cycle Q Clear(g_c), s	4.3	5.8	6.0	8.5	26.5	0.8	7.5	5.0	14.2	7.4	0.0	13.5
Prop In Lane	1.00		0.48	1.00		1.00	1.00		1.00	1.00		0.76
Lane Grp Cap(c), veh/h	323	635	615	570	678	724	314	362	509	387	0	302
V/C Ratio(X)	0.44	0.25	0.26	0.46	0.81	0.03	0.58	0.33	0.58	0.46	0.00	0.84
Avail Cap(c_a), veh/h	341	635	615	624	678	724	314	374	519	387	0	312
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.6	20.4	20.4	13.4	23.5	10.9	25.9	31.0	25.1	25.7	0.0	35.5
Incr Delay (d2), s/veh	0.9	1.0	1.0	0.6	10.3	0.1	2.6	0.5	1.6	0.8	0.0	18.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	2.4	2.4	2.8	11.4	0.2	3.2	2.3	5.4	3.0	0.0	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.6	21.3	21.5	13.9	33.8	11.0	28.5	31.6	26.7	26.5	0.0	53.8
LnGrp LOS	B	C	C	B	C	B	C	C	C	C	A	D
Approach Vol, veh/h		464			835			595			431	
Approach Delay, s/veh		20.8			27.0			28.2			42.6	
Approach LOS		C			C			C			D	

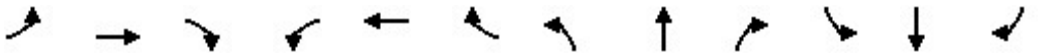
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.4	37.7	15.0	21.0	11.8	42.3	13.8	22.1
Change Period (Y+Rc), s	5.7	6.4	5.6	* 5.4	5.7	6.4	5.6	* 5.4
Max Green Setting (Gmax), s	13.7	27.7	9.4	* 16	7.0	34.4	8.2	* 17
Max Q Clear Time (g_c+I1), s	10.5	8.0	9.5	15.5	6.3	28.5	9.4	16.2
Green Ext Time (p_c), s	0.3	2.9	0.0	0.1	0.0	2.6	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	29.0
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



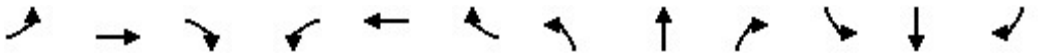
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	526	127	48	699	0	0	0	0	172	0	200
Future Volume (veh/h)	0	526	127	48	699	0	0	0	0	172	0	200
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1744	1758	1772	1758	0				1832	1950	1832
Adj Flow Rate, veh/h	0	598	0	55	794	0				195	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	4	3	2	3	0				3	0	3
Cap, veh/h	0	1582		562	1308	0				258	0	
Arrive On Green	0.00	0.64	0.00	0.03	0.50	0.00				0.14	0.00	0.00
Sat Flow, veh/h	0	2982	1490	1688	1758	0				1857	0	0
Grp Volume(v), veh/h	0	598	0	55	794	0				195	0	0
Grp Sat Flow(s),veh/h/ln	0	1238	1490	1688	1758	0				1857	0	0
Q Serve(g_s), s	0.0	10.3	0.0	0.9	29.2	0.0				9.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	10.3	0.0	0.9	29.2	0.0				9.1	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1582		562	1308	0				258	0	
V/C Ratio(X)	0.00	0.38		0.10	0.61	0.00				0.76	0.00	
Avail Cap(c_a), veh/h	0	1582		637	1308	0				516	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.33	0.33	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	7.7	0.0	5.0	13.1	0.0				37.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.7	0.0				4.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.4	0.0	0.2	12.0	0.0				4.4	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	8.4	0.0	5.1	13.8	0.0				41.7	0.0	6.0
LnGrp LOS	A	A		A	B	A				D	A	A
Approach Vol, veh/h		598	A		849						422	A
Approach Delay, s/veh		8.4			13.2						22.5	
Approach LOS		A			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.5	63.0		17.5		72.5
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	40.0		24.0		53.5
Max Q Clear Time (g_c+I1), s	2.9	12.3		11.1		31.2
Green Ext Time (p_c), s	0.0	0.5		0.5		0.5

Intersection Summary	
HCM 6th Ctrl Delay	13.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	488	213	0	0	509	281	209	1	114	0	0	0
Future Volume (veh/h)	488	213	0	0	509	281	209	1	114	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1772	1716	0	0	1772	1800	1752	1911	1823			
Adj Flow Rate, veh/h	536	234	0	0	559	0	230	1	0			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	6	0	0	2	0	6	0	1			
Cap, veh/h	607	1253	0	0	832		288	1				
Arrive On Green	0.07	0.24	0.00	0.00	0.47	0.00	0.16	0.16	0.00			
Sat Flow, veh/h	1688	1716	0	0	1772	1525	1812	8	0			
Grp Volume(v), veh/h	536	234	0	0	559	0	231	0	0			
Grp Sat Flow(s),veh/h/ln	1688	1716	0	0	1772	1525	1820	0	0			
Q Serve(g_s), s	14.2	9.8	0.0	0.0	22.0	0.0	11.0	0.0	0.0			
Cycle Q Clear(g_c), s	14.2	9.8	0.0	0.0	22.0	0.0	11.0	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	607	1253	0	0	832		289	0				
V/C Ratio(X)	0.88	0.19	0.00	0.00	0.67		0.80	0.00				
Avail Cap(c_a), veh/h	712	1253	0	0	832		384	0				
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.88	0.88	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	19.8	12.9	0.0	0.0	18.5	0.0	36.5	0.0	0.0			
Incr Delay (d2), s/veh	10.1	0.3	0.0	0.0	4.3	0.0	8.5	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	7.7	3.7	0.0	0.0	9.1	0.0	5.5	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	29.9	13.2	0.0	0.0	22.8	0.0	44.9	0.0	6.0			
LnGrp LOS	C	B	A	A	C		D	A	A			
Approach Vol, veh/h		770			559	A		356	A			
Approach Delay, s/veh		24.8			22.8			31.3				
Approach LOS		C			C			C				

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		70.7		19.3	23.4	47.3						
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0						
Max Green Setting (Gmax), s		60.0		18.0	23.0	31.0						
Max Q Clear Time (g_c+I1), s		11.8		13.0	16.2	24.0						
Green Ext Time (p_c), s		0.1		0.3	1.2	0.2						

Intersection Summary												
HCM 6th Ctrl Delay			25.5									
HCM 6th LOS			C									

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	422	63	195	303	127	55	65	169	121	117	35
Future Volume (veh/h)	46	422	63	195	303	127	55	65	169	121	117	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1935	1878	1711	1697	1697	1837	1837	1795	1794	1866	1794
Adj Flow Rate, veh/h	49	449	56	207	322	118	59	69	100	129	124	18
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	1	5	0	1	1	0	0	3	0	0	0
Cap, veh/h	632	783	98	469	888	753	304	91	131	281	279	40
Arrive On Green	0.04	0.46	0.46	0.16	0.87	0.87	0.05	0.13	0.13	0.09	0.17	0.17
Sat Flow, veh/h	1856	1687	210	1629	1697	1438	1750	678	982	1709	1593	231
Grp Volume(v), veh/h	49	0	505	207	322	118	59	0	169	129	0	142
Grp Sat Flow(s),veh/h/ln	1856	0	1897	1629	1697	1438	1750	0	1660	1709	0	1825
Q Serve(g_s), s	1.2	0.0	17.5	5.6	3.1	1.1	2.6	0.0	8.8	5.6	0.0	6.3
Cycle Q Clear(g_c), s	1.2	0.0	17.5	5.6	3.1	1.1	2.6	0.0	8.8	5.6	0.0	6.3
Prop In Lane	1.00		0.11	1.00		1.00	1.00		0.59	1.00		0.13
Lane Grp Cap(c), veh/h	632	0	880	469	888	753	304	0	222	281	0	319
V/C Ratio(X)	0.08	0.00	0.57	0.44	0.36	0.16	0.19	0.00	0.76	0.46	0.00	0.44
Avail Cap(c_a), veh/h	764	0	880	488	888	753	387	0	288	291	0	319
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.89	0.89	0.89	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.5	0.0	17.6	10.9	2.9	2.8	31.0	0.0	37.6	28.6	0.0	33.2
Incr Delay (d2), s/veh	0.1	0.0	2.7	0.6	1.0	0.4	0.3	0.0	8.5	1.2	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	7.6	1.6	1.0	0.4	1.1	0.0	4.1	2.3	0.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.6	0.0	20.3	11.5	3.9	3.2	31.4	0.0	46.1	29.8	0.0	34.2
LnGrp LOS	B	A	C	B	A	A	C	A	D	C	A	C
Approach Vol, veh/h		554			647			228			271	
Approach Delay, s/veh		19.6			6.2			42.3			32.1	
Approach LOS		B			A			D			C	

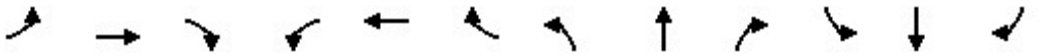
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	47.2	8.7	20.1	8.6	52.5	12.5	16.4
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 8.7	35.6	* 7.8	14.6	* 8.7	35.6	* 7.8	14.6
Max Q Clear Time (g_c+I1), s	7.6	19.5	4.6	8.3	3.2	5.1	7.6	10.8
Green Ext Time (p_c), s	0.1	4.7	0.0	0.2	0.0	5.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	19.5
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	575	143	80	419	0	0	0	0	380	0	193
Future Volume (veh/h)	0	575	143	80	419	0	0	0	0	380	0	193
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1772	0				1875	1950	1860
Adj Flow Rate, veh/h	0	639	0	89	466	0				422	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	1	0	0	2	0				0	0	1
Cap, veh/h	0	914		360	1106	0				481	0	
Arrive On Green	0.00	0.51	0.00	0.10	1.00	0.00				0.26	0.00	0.00
Sat Flow, veh/h	0	1786	1525	1714	1772	0				1857	0	0
Grp Volume(v), veh/h	0	639	0	89	466	0				422	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1772	0				1857	0	0
Q Serve(g_s), s	0.0	24.5	0.0	2.0	0.0	0.0				19.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	24.5	0.0	2.0	0.0	0.0				19.6	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	914		360	1106	0				481	0	
V/C Ratio(X)	0.00	0.70		0.25	0.42	0.00				0.88	0.00	
Avail Cap(c_a), veh/h	0	914		415	1106	0				557	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.71	0.00	0.93	0.93	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	16.7	0.0	11.8	0.0	0.0				32.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.2	0.0	0.3	1.1	0.0				13.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.6	0.0	0.7	0.3	0.0				10.3	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	19.9	0.0	12.2	1.1	0.0				45.3	0.0	6.0
LnGrp LOS	A	B		B	A	A				D	A	A
Approach Vol, veh/h		639	A		555						534	A
Approach Delay, s/veh		19.9			2.9						37.1	
Approach LOS		B			A						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.1	51.5		28.3		61.7
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	6.5	38.5		26.0		51.5
Max Q Clear Time (g_c+I1), s	4.0	26.5		21.6		2.0
Green Ext Time (p_c), s	0.0	0.4		0.7		0.3

Intersection Summary	
HCM 6th Ctrl Delay	19.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

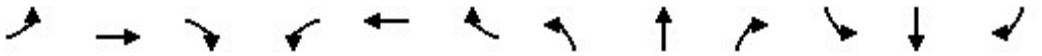
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	542	419	0	0	333	159	174	0	91	0	0	0
Future Volume (veh/h)	542	419	0	0	333	159	174	0	91	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1786	0	0	1772	1786	1823	1911	1795			
Adj Flow Rate, veh/h	630	487	0	0	387	0	202	0	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	1	1	0	0	2	1	1	0	3			
Cap, veh/h	730	1334	0	0	1048		258	0				
Arrive On Green	0.17	1.00	0.00	0.00	0.59	0.00	0.14	0.00	0.00			
Sat Flow, veh/h	1701	1786	0	0	1772	1514	1820	0	0			
Grp Volume(v), veh/h	630	487	0	0	387	0	202	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1786	0	0	1772	1514	1820	0	0			
Q Serve(g_s), s	9.0	0.0	0.0	0.0	10.3	0.0	9.6	0.0	0.0			
Cycle Q Clear(g_c), s	9.0	0.0	0.0	0.0	10.3	0.0	9.6	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	730	1334	0	0	1048		258	0				
V/C Ratio(X)	0.86	0.37	0.00	0.00	0.37		0.78	0.00				
Avail Cap(c_a), veh/h	730	1334	0	0	1048		324	0				
HCM Platoon Ratio	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.55	0.55	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	13.7	0.0	0.0	0.0	9.6	0.0	37.3	0.0	0.0			
Incr Delay (d2), s/veh	6.1	0.4	0.0	0.0	1.0	0.0	9.4	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	7.4	0.2	0.0	0.0	3.7	0.0	4.9	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	19.8	0.4	0.0	0.0	10.6	0.0	46.7	0.0	6.0			
LnGrp LOS	B	A	A	A	B		D	A	A			
Approach Vol, veh/h		1117			387	A		308	A			
Approach Delay, s/veh		11.4			10.6			32.7				
Approach LOS		B			B			C				

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		72.2		17.8	14.0	58.2						
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0						
Max Green Setting (Gmax), s		63.0		15.0	8.0	49.0						
Max Q Clear Time (g_c+I1), s		2.0		11.6	11.0	12.3						
Green Ext Time (p_c), s		0.2		0.2	0.0	0.2						

Intersection Summary												
HCM 6th Ctrl Delay			14.8									
HCM 6th LOS			B									

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	428	64	198	308	129	56	66	172	123	119	36
Future Volume (veh/h)	47	428	64	198	308	129	56	66	172	123	119	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1935	1878	1711	1697	1697	1837	1837	1795	1794	1866	1794
Adj Flow Rate, veh/h	50	455	57	211	328	120	60	70	103	131	127	19
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	1	5	0	1	1	0	0	3	0	0	0
Cap, veh/h	618	727	91	458	843	715	290	72	105	268	240	36
Arrive On Green	0.04	0.43	0.43	0.18	0.83	0.83	0.05	0.11	0.11	0.10	0.15	0.15
Sat Flow, veh/h	1856	1686	211	1629	1697	1438	1750	671	988	1709	1586	237
Grp Volume(v), veh/h	50	0	512	211	328	120	60	0	173	131	0	146
Grp Sat Flow(s),veh/h/ln	1856	0	1897	1629	1697	1438	1750	0	1659	1709	0	1823
Q Serve(g_s), s	1.1	0.0	15.8	5.0	3.6	1.2	2.2	0.0	7.8	4.9	0.0	5.5
Cycle Q Clear(g_c), s	1.1	0.0	15.8	5.0	3.6	1.2	2.2	0.0	7.8	4.9	0.0	5.5
Prop In Lane	1.00		0.11	1.00		1.00	1.00		0.60	1.00		0.13
Lane Grp Cap(c), veh/h	618	0	818	458	843	715	290	0	177	268	0	276
V/C Ratio(X)	0.08	0.00	0.63	0.46	0.39	0.17	0.21	0.00	0.98	0.49	0.00	0.53
Avail Cap(c_a), veh/h	741	0	818	459	843	715	383	0	177	282	0	276
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.86	0.86	0.86	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.8	0.0	16.6	10.1	3.5	3.3	27.4	0.0	33.4	25.2	0.0	29.3
Incr Delay (d2), s/veh	0.1	0.0	3.6	0.6	1.2	0.4	0.3	0.0	60.8	1.4	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	6.8	1.4	1.1	0.4	0.9	0.0	6.1	2.0	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.8	0.0	20.2	10.8	4.7	3.7	27.7	0.0	94.2	26.6	0.0	31.2
LnGrp LOS	B	A	C	B	A	A	C	A	F	C	A	C
Approach Vol, veh/h		562			659			233			277	
Approach Delay, s/veh		19.4			6.5			77.1			29.0	
Approach LOS		B			A			E			C	

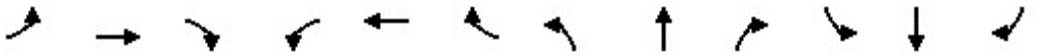
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	37.7	8.2	15.8	8.3	42.7	11.6	12.4
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 7	30.7	* 7	7.0	* 7	30.7	* 7	7.0
Max Q Clear Time (g_c+I1), s	7.0	17.8	4.2	7.5	3.1	5.6	6.9	9.8
Green Ext Time (p_c), s	0.0	4.2	0.0	0.0	0.0	4.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.8
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



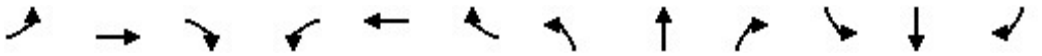
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	584	145	81	425	0	0	0	0	386	0	196
Future Volume (veh/h)	0	584	145	81	425	0	0	0	0	386	0	196
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1772	0				1860	1950	1860
Adj Flow Rate, veh/h	0	649	0	90	472	0				429	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	1	0	0	2	0				1	0	1
Cap, veh/h	0	819		315	1047	0				500	0	
Arrive On Green	0.00	0.46	0.00	0.12	1.00	0.00				0.27	0.00	0.00
Sat Flow, veh/h	0	1786	1525	1714	1772	0				1857	0	0
Grp Volume(v), veh/h	0	649	0	90	472	0				429	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1772	0				1857	0	0
Q Serve(g_s), s	0.0	23.2	0.0	1.9	0.0	0.0				16.5	0.0	0.0
Cycle Q Clear(g_c), s	0.0	23.2	0.0	1.9	0.0	0.0				16.5	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	819		315	1047	0				500	0	
V/C Ratio(X)	0.00	0.79		0.29	0.45	0.00				0.86	0.00	
Avail Cap(c_a), veh/h	0	819		398	1047	0				594	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.72	0.00	0.72	0.72	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	17.3	0.0	12.1	0.0	0.0				26.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	5.7	0.0	0.4	1.0	0.0				10.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.4	0.0	0.6	0.3	0.0				8.3	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	22.9	0.0	12.5	1.0	0.0				36.5	0.0	6.0
LnGrp LOS	A	C		B	A	A				D	A	A
Approach Vol, veh/h		649	A		562						647	A
Approach Delay, s/veh		22.9			2.9						26.3	
Approach LOS		C			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.9	39.9		25.2		49.8
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	26.0		23.0		39.5
Max Q Clear Time (g_c+I1), s	3.9	25.2		18.5		2.0
Green Ext Time (p_c), s	0.1	0.1		0.7		0.3

Intersection Summary		
HCM 6th Ctrl Delay		18.0
HCM 6th LOS		B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



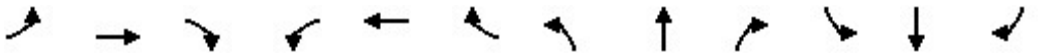
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	550	425	0	0	338	161	177	0	92	0	0	0
Future Volume (veh/h)	550	425	0	0	338	161	177	0	92	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1786	0	0	1772	1786	1823	1911	1795			
Adj Flow Rate, veh/h	640	494	0	0	393	0	206	0	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	1	1	0	0	2	1	1	0	3			
Cap, veh/h	762	1284	0	0	675		269	0				
Arrive On Green	0.36	0.96	0.00	0.00	0.38	0.00	0.15	0.00	0.00			
Sat Flow, veh/h	1701	1786	0	0	1772	1514	1820	0	0			
Grp Volume(v), veh/h	640	494	0	0	393	0	206	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1786	0	0	1772	1514	1820	0	0			
Q Serve(g_s), s	15.9	1.4	0.0	0.0	13.2	0.0	8.2	0.0	0.0			
Cycle Q Clear(g_c), s	15.9	1.4	0.0	0.0	13.2	0.0	8.2	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	762	1284	0	0	675		269	0				
V/C Ratio(X)	0.84	0.38	0.00	0.00	0.58		0.77	0.00				
Avail Cap(c_a), veh/h	867	1284	0	0	675		291	0				
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.28	0.28	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	8.6	0.5	0.0	0.0	18.5	0.0	30.7	0.0	0.0			
Incr Delay (d2), s/veh	2.0	0.2	0.0	0.0	3.6	0.0	10.8	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.2	0.3	0.0	0.0	5.5	0.0	4.3	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	10.6	0.7	0.0	0.0	22.1	0.0	41.5	0.0	6.0			
LnGrp LOS	B	A	A	A	C		D	A	A			
Approach Vol, veh/h		1134			393	A		313	A			
Approach Delay, s/veh		6.3			22.1			29.4				
Approach LOS		A			C			C				

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	58.9	16.1	25.3	33.6
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	52.0	11.0	24.0	22.0
Max Q Clear Time (g_c+I1), s	3.4	10.2	17.9	15.2
Green Ext Time (p_c), s	0.2	0.1	1.4	0.1

Intersection Summary	
HCM 6th Ctrl Delay	13.6
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	460	71	198	318	129	58	66	172	123	119	37
Future Volume (veh/h)	50	460	71	198	318	129	58	66	172	123	119	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1935	1878	1711	1697	1697	1837	1837	1795	1794	1866	1794
Adj Flow Rate, veh/h	53	489	65	211	338	120	62	70	103	131	127	20
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	1	5	0	1	1	0	0	3	0	0	0
Cap, veh/h	615	832	772	463	837	853	291	72	105	269	237	37
Arrive On Green	0.04	0.43	0.43	0.18	0.82	0.82	0.06	0.11	0.11	0.10	0.15	0.15
Sat Flow, veh/h	1856	1935	1591	1629	1697	1438	1750	671	988	1709	1574	248
Grp Volume(v), veh/h	53	489	65	211	338	120	62	0	173	131	0	147
Grp Sat Flow(s),veh/h/ln	1856	1935	1591	1629	1697	1438	1750	0	1659	1709	0	1822
Q Serve(g_s), s	1.2	14.5	1.6	5.0	3.9	1.0	2.3	0.0	7.8	4.9	0.0	5.6
Cycle Q Clear(g_c), s	1.2	14.5	1.6	5.0	3.9	1.0	2.3	0.0	7.8	4.9	0.0	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.60	1.00		0.14
Lane Grp Cap(c), veh/h	615	832	772	463	837	853	291	0	177	269	0	275
V/C Ratio(X)	0.09	0.59	0.08	0.46	0.40	0.14	0.21	0.00	0.98	0.49	0.00	0.54
Avail Cap(c_a), veh/h	735	832	772	465	837	853	381	0	177	282	0	275
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.87	0.87	0.87	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.8	16.3	10.4	9.8	3.7	2.2	27.3	0.0	33.4	25.6	0.0	29.4
Incr Delay (d2), s/veh	0.1	3.0	0.2	0.6	1.3	0.3	0.4	0.0	60.8	1.4	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	6.3	0.6	1.3	1.2	0.3	1.0	0.0	6.1	2.0	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.8	19.4	10.6	10.4	4.9	2.5	27.7	0.0	94.2	26.9	0.0	31.5
LnGrp LOS	B	B	B	B	A	A	C	A	F	C	A	C
Approach Vol, veh/h		607			669			235			278	
Approach Delay, s/veh		17.7			6.2			76.7			29.3	
Approach LOS		B			A			E			C	

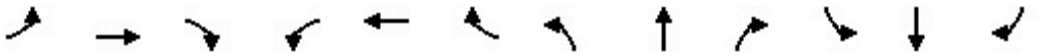
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	37.6	8.8	15.8	7.9	42.4	12.1	12.5
Change Period (Y+Rc), s	* 5.8	6.4	* 5.7	5.5	* 5.8	6.4	* 5.7	5.5
Max Green Setting (Gmax), s	* 7	30.6	* 7	7.0	* 7	30.6	* 7	7.0
Max Q Clear Time (g_c+I1), s	7.0	16.5	4.3	7.6	3.2	5.9	6.9	9.8
Green Ext Time (p_c), s	0.0	4.7	0.0	0.0	0.0	4.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.0
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	612	149	81	431	0	0	0	0	386	0	200
Future Volume (veh/h)	0	612	149	81	431	0	0	0	0	386	0	200
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1772	0				1860	1950	1860
Adj Flow Rate, veh/h	0	680	0	90	479	0				429	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	1	0	0	2	0				1	0	1
Cap, veh/h	0	825		297	1052	0				495	0	
Arrive On Green	0.00	0.46	0.00	0.06	0.59	0.00				0.27	0.00	0.00
Sat Flow, veh/h	0	1786	1525	1714	1772	0				1857	0	0
Grp Volume(v), veh/h	0	680	0	90	479	0				429	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1772	0				1857	0	0
Q Serve(g_s), s	0.0	24.8	0.0	1.9	11.3	0.0				16.5	0.0	0.0
Cycle Q Clear(g_c), s	0.0	24.8	0.0	1.9	11.3	0.0				16.5	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	825		297	1052	0				495	0	
V/C Ratio(X)	0.00	0.82		0.30	0.46	0.00				0.87	0.00	
Avail Cap(c_a), veh/h	0	825		380	1052	0				545	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.74	0.00	0.67	0.67	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	17.5	0.0	13.6	8.5	0.0				26.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	7.0	0.0	0.4	1.0	0.0				13.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.7	0.0	0.6	3.6	0.0				8.7	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	24.5	0.0	13.9	9.4	0.0				39.3	0.0	6.0
LnGrp LOS	A	C		B	A	A				D	A	A
Approach Vol, veh/h		680	A		569						651	A
Approach Delay, s/veh		24.5			10.2						27.9	
Approach LOS		C			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.9	40.1		25.0		50.0
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	28.0		21.0		41.5
Max Q Clear Time (g_c+I1), s	3.9	26.8		18.5		13.3
Green Ext Time (p_c), s	0.1	0.1		0.5		0.3

Intersection Summary	
HCM 6th Ctrl Delay	21.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

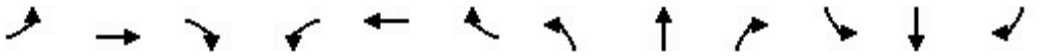
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	566	437	0	0	342	161	179	0	92	0	0	0
Future Volume (veh/h)	566	437	0	0	342	161	179	0	92	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1786	0	0	1772	1786	1823	1911	1795			
Adj Flow Rate, veh/h	658	508	0	0	398	0	208	0	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	1	1	0	0	2	1	1	0	3			
Cap, veh/h	749	1282	0	0	708		271	0				
Arrive On Green	0.17	0.48	0.00	0.00	0.40	0.00	0.15	0.00	0.00			
Sat Flow, veh/h	1701	1786	0	0	1772	1514	1820	0	0			
Grp Volume(v), veh/h	658	508	0	0	398	0	208	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1786	0	0	1772	1514	1820	0	0			
Q Serve(g_s), s	14.0	13.7	0.0	0.0	13.0	0.0	8.2	0.0	0.0			
Cycle Q Clear(g_c), s	14.0	13.7	0.0	0.0	13.0	0.0	8.2	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	749	1282	0	0	708		271	0				
V/C Ratio(X)	0.88	0.40	0.00	0.00	0.56		0.77	0.00				
Avail Cap(c_a), veh/h	910	1282	0	0	708		291	0				
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.31	0.31	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	11.5	9.0	0.0	0.0	17.4	0.0	30.7	0.0	0.0			
Incr Delay (d2), s/veh	2.9	0.3	0.0	0.0	3.2	0.0	11.0	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.9	5.1	0.0	0.0	5.3	0.0	4.3	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	14.4	9.3	0.0	0.0	20.7	0.0	41.7	0.0	6.0			
LnGrp LOS	B	A	A	A	C		D	A	A			
Approach Vol, veh/h		1166			398	A		315	A			
Approach Delay, s/veh		12.2			20.7			29.6				
Approach LOS		B			C			C				

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	58.8	16.2	23.9	35.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	52.0	11.0	25.0	21.0
Max Q Clear Time (g_c+I1), s	15.7	10.2	16.0	15.0
Green Ext Time (p_c), s	0.3	0.1	1.9	0.1

Intersection Summary	
HCM 6th Ctrl Delay	16.9
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	351	90	242	240	129	76	79	218	225	135	102
Future Volume (veh/h)	126	351	90	242	240	129	76	79	218	225	135	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1935	1906	1711	1697	1697	1837	1837	1809	1794	1866	1794
Adj Flow Rate, veh/h	134	373	82	257	255	76	81	84	182	239	144	94
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	1	3	0	1	1	0	0	2	0	0	0
Cap, veh/h	561	620	136	406	712	604	312	90	194	299	243	159
Arrive On Green	0.07	0.40	0.40	0.09	0.42	0.42	0.06	0.17	0.17	0.12	0.23	0.23
Sat Flow, veh/h	1856	1536	338	1629	1697	1438	1750	517	1119	1709	1054	688
Grp Volume(v), veh/h	134	0	455	257	255	76	81	0	266	239	0	238
Grp Sat Flow(s),veh/h/ln	1856	0	1874	1629	1697	1438	1750	0	1636	1709	0	1742
Q Serve(g_s), s	3.7	0.0	17.2	8.0	9.2	2.9	3.3	0.0	14.4	10.0	0.0	11.0
Cycle Q Clear(g_c), s	3.7	0.0	17.2	8.0	9.2	2.9	3.3	0.0	14.4	10.0	0.0	11.0
Prop In Lane	1.00		0.18	1.00		1.00	1.00		0.68	1.00		0.39
Lane Grp Cap(c), veh/h	561	0	756	406	712	604	312	0	284	299	0	402
V/C Ratio(X)	0.24	0.00	0.60	0.63	0.36	0.13	0.26	0.00	0.94	0.80	0.00	0.59
Avail Cap(c_a), veh/h	592	0	756	406	712	604	358	0	284	299	0	402
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.7	0.0	21.2	17.0	17.8	16.0	27.7	0.0	36.7	26.2	0.0	30.9
Incr Delay (d2), s/veh	0.2	0.0	3.5	3.2	1.4	0.4	0.4	0.0	37.2	14.3	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	7.7	3.2	3.6	1.0	1.4	0.0	8.6	5.1	0.0	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.9	0.0	24.7	20.1	19.2	16.4	28.2	0.0	73.9	40.5	0.0	33.2
LnGrp LOS	B	A	C	C	B	B	C	A	E	D	A	C
Approach Vol, veh/h		589			588			347			477	
Approach Delay, s/veh		22.2			19.3			63.2			36.8	
Approach LOS		C			B			E			D	

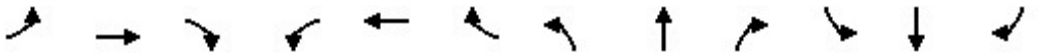
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	41.7	9.9	25.1	11.8	43.2	15.0	20.0
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 7	35.3	* 7	17.4	* 7	35.3	* 9.8	14.6
Max Q Clear Time (g_c+I1), s	10.0	19.2	5.3	13.0	5.7	11.2	12.0	16.4
Green Ext Time (p_c), s	0.0	4.2	0.0	0.3	0.0	3.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	32.0
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



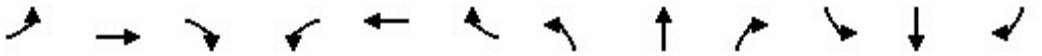
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	628	174	81	469	0	0	0	0	386	0	221
Future Volume (veh/h)	0	628	174	81	469	0	0	0	0	386	0	221
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1772	0				1860	1950	1860
Adj Flow Rate, veh/h	0	698	0	90	521	0				429	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	1	0	0	2	0				1	0	1
Cap, veh/h	0	901		304	1095	0				493	0	
Arrive On Green	0.00	0.50	0.00	0.07	0.82	0.00				0.27	0.00	0.00
Sat Flow, veh/h	0	1786	1525	1714	1772	0				1857	0	0
Grp Volume(v), veh/h	0	698	0	90	521	0				429	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1772	0				1857	0	0
Q Serve(g_s), s	0.0	28.6	0.0	2.1	7.7	0.0				19.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	28.6	0.0	2.1	7.7	0.0				19.9	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	901		304	1095	0				493	0	
V/C Ratio(X)	0.00	0.77		0.30	0.48	0.00				0.87	0.00	
Avail Cap(c_a), veh/h	0	901		367	1095	0				619	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.67	0.67	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	18.1	0.0	14.1	3.8	0.0				31.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	6.5	0.0	0.4	1.0	0.0				10.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	12.0	0.0	0.7	2.0	0.0				10.1	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	24.6	0.0	14.4	4.7	0.0				42.4	0.0	6.0
LnGrp LOS	A	C		B	A	A				D	A	A
Approach Vol, veh/h		698	A		611						569	A
Approach Delay, s/veh		24.6			6.2						33.4	
Approach LOS		C			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.2	50.9		28.9		61.1
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	35.0		29.0		48.5
Max Q Clear Time (g_c+I1), s	4.1	30.6		21.9		9.7
Green Ext Time (p_c), s	0.1	0.3		1.0		0.3

Intersection Summary	
HCM 6th Ctrl Delay	21.3
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



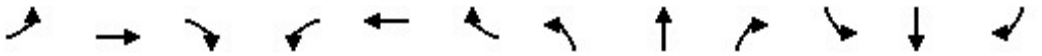
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	582	437	0	0	353	161	206	0	92	0	0	0
Future Volume (veh/h)	582	437	0	0	353	161	206	0	92	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1786	0	0	1772	1786	1823	1911	1795			
Adj Flow Rate, veh/h	677	508	0	0	410	0	240	0	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	1	1	0	0	2	1	1	0	3			
Cap, veh/h	740	1299	0	0	732		294	0				
Arrive On Green	0.26	0.73	0.00	0.00	0.41	0.00	0.16	0.00	0.00			
Sat Flow, veh/h	1701	1786	0	0	1772	1514	1820	0	0			
Grp Volume(v), veh/h	677	508	0	0	410	0	240	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1786	0	0	1772	1514	1820	0	0			
Q Serve(g_s), s	18.2	9.8	0.0	0.0	15.9	0.0	11.5	0.0	0.0			
Cycle Q Clear(g_c), s	18.2	9.8	0.0	0.0	15.9	0.0	11.5	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	740	1299	0	0	732		294	0				
V/C Ratio(X)	0.92	0.39	0.00	0.00	0.56		0.82	0.00				
Avail Cap(c_a), veh/h	886	1299	0	0	732		324	0				
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.29	0.29	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	12.1	4.7	0.0	0.0	20.2	0.0	36.4	0.0	0.0			
Incr Delay (d2), s/veh	4.3	0.3	0.0	0.0	3.1	0.0	13.8	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.7	2.6	0.0	0.0	6.7	0.0	6.1	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	16.4	4.9	0.0	0.0	23.2	0.0	50.2	0.0	6.0			
LnGrp LOS	B	A	A	A	C		D	A	A			
Approach Vol, veh/h		1185			410	A		347	A			
Approach Delay, s/veh		11.5			23.2			36.6				
Approach LOS		B			C			D				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		70.4		19.6	28.2	42.2			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		63.0		15.0	30.0	27.0			
Max Q Clear Time (g_c+I1), s		11.8		13.5	20.2	17.9			
Green Ext Time (p_c), s		0.3		0.1	2.0	0.2			

Intersection Summary		
HCM 6th Ctrl Delay	18.4	
HCM 6th LOS	B	

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	383	97	242	250	129	78	79	218	225	135	103
Future Volume (veh/h)	129	383	97	242	250	129	78	79	218	225	135	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1935	1906	1711	1697	1697	1837	1837	1809	1794	1866	1794
Adj Flow Rate, veh/h	137	407	89	257	266	76	83	84	182	239	144	95
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	1	3	0	1	1	0	0	2	0	0	0
Cap, veh/h	546	770	746	421	701	774	317	89	193	307	245	162
Arrive On Green	0.07	0.40	0.40	0.09	0.41	0.41	0.06	0.17	0.17	0.13	0.23	0.23
Sat Flow, veh/h	1856	1935	1616	1629	1697	1438	1750	517	1119	1709	1049	692
Grp Volume(v), veh/h	137	407	89	257	266	76	83	0	266	239	0	239
Grp Sat Flow(s),veh/h/ln	1856	1935	1616	1629	1697	1438	1750	0	1636	1709	0	1742
Q Serve(g_s), s	3.8	14.4	2.8	8.0	9.8	2.3	3.4	0.0	14.5	10.0	0.0	11.0
Cycle Q Clear(g_c), s	3.8	14.4	2.8	8.0	9.8	2.3	3.4	0.0	14.5	10.0	0.0	11.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.68	1.00		0.40
Lane Grp Cap(c), veh/h	546	770	746	421	701	774	317	0	282	307	0	407
V/C Ratio(X)	0.25	0.53	0.12	0.61	0.38	0.10	0.26	0.00	0.94	0.78	0.00	0.59
Avail Cap(c_a), veh/h	574	770	746	421	701	774	361	0	282	307	0	407
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.0	20.7	13.8	16.6	18.4	10.1	27.7	0.0	36.8	25.9	0.0	30.6
Incr Delay (d2), s/veh	0.2	2.6	0.3	2.6	1.6	0.3	0.4	0.0	38.8	12.0	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	6.6	1.1	3.2	3.9	0.8	1.5	0.0	8.8	4.9	0.0	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.3	23.3	14.1	19.2	20.0	10.4	28.2	0.0	75.6	37.9	0.0	32.8
LnGrp LOS	B	C	B	B	B	B	C	A	E	D	A	C
Approach Vol, veh/h		633			599			349			478	
Approach Delay, s/veh		20.0			18.4			64.3			35.4	
Approach LOS		C			B			E			D	

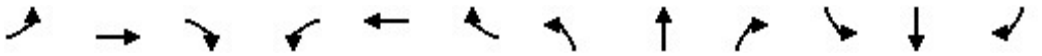
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	41.2	10.5	25.5	11.4	42.6	16.0	20.0
Change Period (Y+Rc), s	* 5.8	6.4	* 5.7	5.5	* 5.8	6.4	* 5.7	5.5
Max Green Setting (Gmax), s	* 7	34.8	* 7	17.8	* 7	34.8	* 10	14.5
Max Q Clear Time (g_c+I1), s	10.0	16.4	5.4	13.0	5.8	11.8	12.0	16.5
Green Ext Time (p_c), s	0.0	4.7	0.0	0.3	0.0	3.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	30.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



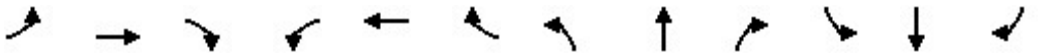
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	656	178	81	475	0	0	0	0	386	0	225
Future Volume (veh/h)	0	656	178	81	475	0	0	0	0	386	0	225
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1772	0				1860	1950	1860
Adj Flow Rate, veh/h	0	729	0	90	528	0				429	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	1	0	0	2	0				1	0	1
Cap, veh/h	0	901		284	1095	0				493	0	
Arrive On Green	0.00	0.50	0.00	0.05	0.62	0.00				0.27	0.00	0.00
Sat Flow, veh/h	0	1786	1525	1714	1772	0				1857	0	0
Grp Volume(v), veh/h	0	729	0	90	528	0				429	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1772	0				1857	0	0
Q Serve(g_s), s	0.0	30.8	0.0	2.1	14.6	0.0				19.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	30.8	0.0	2.1	14.6	0.0				19.9	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	901		284	1095	0				493	0	
V/C Ratio(X)	0.00	0.81		0.32	0.48	0.00				0.87	0.00	
Avail Cap(c_a), veh/h	0	901		346	1095	0				619	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.60	0.60	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	18.7	0.0	15.3	9.4	0.0				31.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	7.8	0.0	0.4	0.9	0.0				10.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	13.6	0.0	0.7	4.9	0.0				10.1	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	26.4	0.0	15.6	10.3	0.0				42.4	0.0	6.0
LnGrp LOS	A	C		B	B	A				D	A	A
Approach Vol, veh/h		729	A		618						573	A
Approach Delay, s/veh		26.4			11.1						33.2	
Approach LOS		C			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.2	50.9		28.9		61.1
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	35.0		29.0		48.5
Max Q Clear Time (g_c+I1), s	4.1	32.8		21.9		16.6
Green Ext Time (p_c), s	0.1	0.2		1.0		0.3

Intersection Summary	
HCM 6th Ctrl Delay	23.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



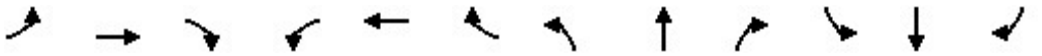
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	598	449	0	0	357	161	208	0	92	0	0	0
Future Volume (veh/h)	598	449	0	0	357	161	208	0	92	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1786	0	0	1772	1786	1823	1911	1795			
Adj Flow Rate, veh/h	695	522	0	0	415	0	242	0	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	1	1	0	0	2	1	1	0	3			
Cap, veh/h	758	1297	0	0	647		296	0				
Arrive On Green	0.20	0.49	0.00	0.00	0.37	0.00	0.16	0.00	0.00			
Sat Flow, veh/h	1701	1786	0	0	1772	1514	1820	0	0			
Grp Volume(v), veh/h	695	522	0	0	415	0	242	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1786	0	0	1772	1514	1820	0	0			
Q Serve(g_s), s	22.9	16.8	0.0	0.0	17.5	0.0	11.6	0.0	0.0			
Cycle Q Clear(g_c), s	22.9	16.8	0.0	0.0	17.5	0.0	11.6	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	758	1297	0	0	647		296	0				
V/C Ratio(X)	0.92	0.40	0.00	0.00	0.64		0.82	0.00				
Avail Cap(c_a), veh/h	844	1297	0	0	647		324	0				
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.20	0.20	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	18.8	10.6	0.0	0.0	23.7	0.0	36.4	0.0	0.0			
Incr Delay (d2), s/veh	3.5	0.2	0.0	0.0	4.8	0.0	14.0	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	9.4	7.0	0.0	0.0	7.7	0.0	6.2	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	22.2	10.8	0.0	0.0	28.5	0.0	50.4	0.0	6.0			
LnGrp LOS	C	B	A	A	C		D	A	A			
Approach Vol, veh/h		1217			415	A		349	A			
Approach Delay, s/veh		17.3			28.5			36.8				
Approach LOS		B			C			D				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		70.4		19.6	32.5	37.9			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		63.0		15.0	31.0	26.0			
Max Q Clear Time (g_c+I1), s		18.8		13.6	24.9	19.5			
Green Ext Time (p_c), s		0.3		0.1	1.6	0.2			

Intersection Summary	
HCM 6th Ctrl Delay	23.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	383	97	242	250	129	78	79	218	225	135	103
Future Volume (veh/h)	129	383	97	242	250	129	78	79	218	225	135	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1935	1906	1711	1697	1697	1837	1837	1809	1794	1866	1794
Adj Flow Rate, veh/h	137	407	89	257	266	76	83	84	182	239	144	95
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	1	3	0	1	1	0	0	2	0	0	0
Cap, veh/h	549	994	215	509	647	713	294	269	432	411	201	133
Arrive On Green	0.08	0.33	0.33	0.14	0.38	0.38	0.07	0.15	0.15	0.11	0.19	0.19
Sat Flow, veh/h	1856	3005	651	1629	1697	1438	1750	1837	1533	1709	1049	692
Grp Volume(v), veh/h	137	248	248	257	266	76	83	84	182	239	0	239
Grp Sat Flow(s),veh/h/ln	1856	1838	1818	1629	1697	1438	1750	1837	1533	1709	0	1742
Q Serve(g_s), s	3.3	7.3	7.4	6.8	8.0	2.0	2.7	2.9	6.8	8.0	0.0	9.0
Cycle Q Clear(g_c), s	3.3	7.3	7.4	6.8	8.0	2.0	2.7	2.9	6.8	8.0	0.0	9.0
Prop In Lane	1.00		0.36	1.00		1.00	1.00		1.00	1.00		0.40
Lane Grp Cap(c), veh/h	549	608	601	509	647	713	294	269	432	411	0	334
V/C Ratio(X)	0.25	0.41	0.41	0.50	0.41	0.11	0.28	0.31	0.42	0.58	0.00	0.72
Avail Cap(c_a), veh/h	604	608	601	509	647	713	374	407	547	411	0	386
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.1	18.1	18.2	12.0	15.9	9.4	22.9	26.7	20.5	22.0	0.0	26.5
Incr Delay (d2), s/veh	0.2	2.0	2.1	0.8	1.9	0.3	0.5	0.7	0.7	2.1	0.0	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	3.1	3.1	2.2	3.1	0.6	1.1	1.3	2.4	3.3	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.3	20.1	20.2	12.8	17.8	9.7	23.4	27.4	21.1	24.1	0.0	31.8
LnGrp LOS	B	C	C	B	B	A	C	C	C	C	A	C
Approach Vol, veh/h		633			599			349			478	
Approach Delay, s/veh		18.7			14.6			23.2			27.9	
Approach LOS		B			B			C			C	

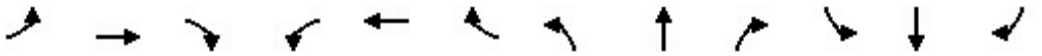
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.2	28.6	9.4	17.8	10.6	32.1	12.6	14.6
Change Period (Y+Rc), s	5.7	6.4	5.6	* 5.4	5.7	6.4	5.6	* 5.4
Max Green Setting (Gmax), s	8.5	16.9	7.0	* 15	7.0	18.4	7.0	* 15
Max Q Clear Time (g_c+I1), s	8.8	9.4	4.7	11.0	5.3	10.0	10.0	8.8
Green Ext Time (p_c), s	0.0	2.6	0.0	0.2	0.1	1.9	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	20.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



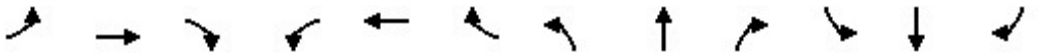
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑						✣	
Traffic Volume (veh/h)	0	656	178	81	475	0	0	0	0	386	0	225
Future Volume (veh/h)	0	656	178	81	475	0	0	0	0	386	0	225
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1772	0				1860	1950	1860
Adj Flow Rate, veh/h	0	729	0	90	528	0				429	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	1	0	0	2	0				1	0	1
Cap, veh/h	0	1362		392	1016	0				514	0	
Arrive On Green	0.00	0.43	0.00	0.04	0.38	0.00				0.28	0.00	0.00
Sat Flow, veh/h	0	3358	1525	1714	1772	0				1857	0	0
Grp Volume(v), veh/h	0	729	0	90	528	0				429	0	0
Grp Sat Flow(s),veh/h/ln	0	1572	1525	1714	1772	0				1857	0	0
Q Serve(g_s), s	0.0	12.0	0.0	1.9	16.0	0.0				15.2	0.0	0.0
Cycle Q Clear(g_c), s	0.0	12.0	0.0	1.9	16.0	0.0				15.2	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1362		392	1016	0				514	0	
V/C Ratio(X)	0.00	0.54		0.23	0.52	0.00				0.84	0.00	
Avail Cap(c_a), veh/h	0	1362		482	1016	0				716	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.53	0.53	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	14.6	0.0	10.2	14.1	0.0				23.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.5	0.0	0.2	1.0	0.0				6.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.1	0.0	0.6	6.7	0.0				7.1	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	16.1	0.0	10.4	15.1	0.0				29.9	0.0	6.0
LnGrp LOS	A	B		B	B	A				C	A	A
Approach Vol, veh/h		729	A		618						573	A
Approach Delay, s/veh		16.1			14.5						23.9	
Approach LOS		B			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.8	35.8		24.4		45.6
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	18.0		26.0		31.5
Max Q Clear Time (g_c+I1), s	3.9	14.0		17.2		18.0
Green Ext Time (p_c), s	0.1	0.5		1.1		0.3

Intersection Summary	
HCM 6th Ctrl Delay	17.9
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



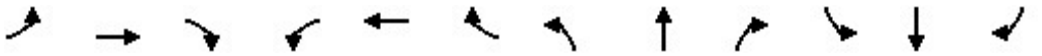
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	598	449	0	0	357	161	208	0	92	0	0	0
Future Volume (veh/h)	598	449	0	0	357	161	208	0	92	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1786	0	0	1772	1786	1823	1911	1795			
Adj Flow Rate, veh/h	695	522	0	0	415	0	242	0	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	1	1	0	0	2	1	1	0	3			
Cap, veh/h	734	1250	0	0	558		286	0				
Arrive On Green	0.42	0.93	0.00	0.00	0.31	0.00	0.16	0.00	0.00			
Sat Flow, veh/h	1701	1786	0	0	1772	1514	1820	0	0			
Grp Volume(v), veh/h	695	522	0	0	415	0	242	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1786	0	0	1772	1514	1820	0	0			
Q Serve(g_s), s	18.4	2.3	0.0	0.0	14.7	0.0	9.0	0.0	0.0			
Cycle Q Clear(g_c), s	18.4	2.3	0.0	0.0	14.7	0.0	9.0	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	734	1250	0	0	558		286	0				
V/C Ratio(X)	0.95	0.42	0.00	0.00	0.74		0.85	0.00				
Avail Cap(c_a), veh/h	759	1250	0	0	558		286	0				
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.65	0.65	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	9.3	0.8	0.0	0.0	21.5	0.0	28.7	0.0	0.0			
Incr Delay (d2), s/veh	15.1	0.7	0.0	0.0	8.7	0.0	20.3	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.1	0.6	0.0	0.0	6.8	0.0	5.4	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	24.3	1.5	0.0	0.0	30.2	0.0	49.0	0.0	6.0			
LnGrp LOS	C	A	A	A	C		D	A	A			
Approach Vol, veh/h		1217			415	A		349	A			
Approach Delay, s/veh		14.5			30.2			35.8				
Approach LOS		B			C			D				

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		54.0		16.0	27.0	27.0						
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0						
Max Green Setting (Gmax), s		48.0		10.0	22.0	20.0						
Max Q Clear Time (g_c+I1), s		4.3		11.0	20.4	16.7						
Green Ext Time (p_c), s		0.3		0.0	0.5	0.1						

Intersection Summary												
HCM 6th Ctrl Delay			21.6									
HCM 6th LOS			C									

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	444	66	205	319	134	58	68	178	127	123	37
Future Volume (veh/h)	48	444	66	205	319	134	58	68	178	127	123	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1935	1878	1711	1697	1697	1837	1837	1795	1794	1866	1794
Adj Flow Rate, veh/h	51	472	59	218	339	126	62	72	109	135	131	20
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	1	5	0	1	1	0	0	3	0	0	0
Cap, veh/h	609	722	90	443	839	711	290	70	106	269	241	37
Arrive On Green	0.04	0.43	0.43	0.18	0.83	0.83	0.06	0.11	0.11	0.10	0.15	0.15
Sat Flow, veh/h	1856	1686	211	1629	1697	1438	1750	659	998	1709	1581	241
Grp Volume(v), veh/h	51	0	531	218	339	126	62	0	181	135	0	151
Grp Sat Flow(s),veh/h/ln	1856	0	1897	1629	1697	1438	1750	0	1658	1709	0	1823
Q Serve(g_s), s	1.1	0.0	16.7	5.3	3.9	1.3	2.3	0.0	8.0	5.0	0.0	5.7
Cycle Q Clear(g_c), s	1.1	0.0	16.7	5.3	3.9	1.3	2.3	0.0	8.0	5.0	0.0	5.7
Prop In Lane	1.00		0.11	1.00		1.00	1.00		0.60	1.00		0.13
Lane Grp Cap(c), veh/h	609	0	813	443	839	711	290	0	177	269	0	278
V/C Ratio(X)	0.08	0.00	0.65	0.49	0.40	0.18	0.21	0.00	1.02	0.50	0.00	0.54
Avail Cap(c_a), veh/h	731	0	813	443	839	711	380	0	177	278	0	278
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.86	0.86	0.86	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.9	0.0	17.0	10.5	3.7	3.4	27.3	0.0	33.5	25.1	0.0	29.4
Incr Delay (d2), s/veh	0.1	0.0	4.1	0.7	1.2	0.5	0.4	0.0	74.0	1.5	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	7.2	1.4	1.2	0.4	1.0	0.0	6.8	2.0	0.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.9	0.0	21.1	11.3	4.9	3.9	27.7	0.0	107.5	26.5	0.0	31.6
LnGrp LOS	B	A	C	B	A	A	C	A	F	C	A	C
Approach Vol, veh/h		582			683			243			286	
Approach Delay, s/veh		20.2			6.8			87.2			29.2	
Approach LOS		C			A			F			C	

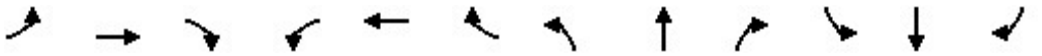
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	37.5	8.3	15.8	8.4	42.5	11.8	12.4
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 7	30.7	* 7	7.0	* 7	30.7	* 7	7.0
Max Q Clear Time (g_c+I1), s	7.3	18.7	4.3	7.7	3.1	5.9	7.0	10.0
Green Ext Time (p_c), s	0.0	4.2	0.0	0.0	0.0	5.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	25.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



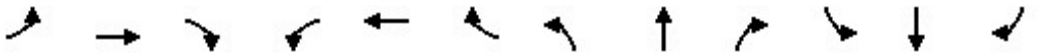
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	605	151	84	441	0	0	0	0	400	0	203
Future Volume (veh/h)	0	605	151	84	441	0	0	0	0	400	0	203
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1772	0				1860	1950	1860
Adj Flow Rate, veh/h	0	672	0	93	490	0				444	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	1	0	0	2	0				1	0	1
Cap, veh/h	0	808		293	1036	0				511	0	
Arrive On Green	0.00	0.45	0.00	0.08	0.78	0.00				0.28	0.00	0.00
Sat Flow, veh/h	0	1786	1525	1714	1772	0				1857	0	0
Grp Volume(v), veh/h	0	672	0	93	490	0				444	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1772	0				1857	0	0
Q Serve(g_s), s	0.0	24.8	0.0	2.0	7.3	0.0				17.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	24.8	0.0	2.0	7.3	0.0				17.1	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	808		293	1036	0				511	0	
V/C Ratio(X)	0.00	0.83		0.32	0.47	0.00				0.87	0.00	
Avail Cap(c_a), veh/h	0	808		374	1036	0				569	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.70	0.00	0.62	0.62	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	18.0	0.0	13.6	4.3	0.0				25.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	7.1	0.0	0.4	1.0	0.0				12.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.3	0.0	0.6	1.9	0.0				8.9	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	25.1	0.0	14.0	5.2	0.0				38.5	0.0	6.0
LnGrp LOS	A	C		B	A	A				D	A	A
Approach Vol, veh/h		672	A		583						670	A
Approach Delay, s/veh		25.1			6.6						27.6	
Approach LOS		C			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.0	39.4		25.6		49.4
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	27.0		22.0		40.5
Max Q Clear Time (g_c+I1), s	4.0	26.8		19.1		9.3
Green Ext Time (p_c), s	0.1	0.0		0.5		0.3

Intersection Summary		
HCM 6th Ctrl Delay		20.4
HCM 6th LOS		C

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



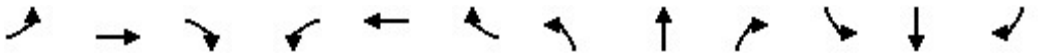
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	571	441	0	0	351	167	183	0	96	0	0	0
Future Volume (veh/h)	571	441	0	0	351	167	183	0	96	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1786	0	0	1772	1786	1823	1911	1795			
Adj Flow Rate, veh/h	664	513	0	0	408	0	213	0	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	1	1	0	0	2	1	1	0	3			
Cap, veh/h	745	1277	0	0	670		275	0				
Arrive On Green	0.27	0.72	0.00	0.00	0.38	0.00	0.15	0.00	0.00			
Sat Flow, veh/h	1701	1786	0	0	1772	1514	1820	0	0			
Grp Volume(v), veh/h	664	513	0	0	408	0	213	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1786	0	0	1772	1514	1820	0	0			
Q Serve(g_s), s	15.6	8.6	0.0	0.0	14.0	0.0	8.4	0.0	0.0			
Cycle Q Clear(g_c), s	15.6	8.6	0.0	0.0	14.0	0.0	8.4	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	745	1277	0	0	670		275	0				
V/C Ratio(X)	0.89	0.40	0.00	0.00	0.61		0.77	0.00				
Avail Cap(c_a), veh/h	875	1277	0	0	670		291	0				
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.27	0.27	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	10.6	4.3	0.0	0.0	18.8	0.0	30.6	0.0	0.0			
Incr Delay (d2), s/veh	3.1	0.3	0.0	0.0	4.1	0.0	11.6	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.4	1.9	0.0	0.0	5.9	0.0	4.5	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	13.7	4.5	0.0	0.0	22.9	0.0	42.2	0.0	6.0			
LnGrp LOS	B	A	A	A	C		D	A	A			
Approach Vol, veh/h		1177			408	A		325	A			
Approach Delay, s/veh		9.7			22.9			29.7				
Approach LOS		A			C			C				

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		58.6		16.4	25.3	33.4						
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0						
Max Green Setting (Gmax), s		52.0		11.0	25.0	21.0						
Max Q Clear Time (g_c+I1), s		10.6		10.4	17.6	16.0						
Green Ext Time (p_c), s		0.3		0.0	1.7	0.1						

Intersection Summary												
HCM 6th Ctrl Delay			15.9									
HCM 6th LOS			B									

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	476	73	205	329	134	60	68	178	127	123	38
Future Volume (veh/h)	51	476	73	205	329	134	60	68	178	127	123	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1935	1878	1711	1697	1697	1837	1837	1795	1794	1866	1794
Adj Flow Rate, veh/h	54	506	67	218	350	126	64	72	109	135	131	21
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	1	5	0	1	1	0	0	3	0	0	0
Cap, veh/h	605	825	769	451	833	852	290	70	106	269	238	38
Arrive On Green	0.04	0.43	0.43	0.18	0.82	0.82	0.06	0.11	0.11	0.10	0.15	0.15
Sat Flow, veh/h	1856	1935	1591	1629	1697	1438	1750	659	998	1709	1569	252
Grp Volume(v), veh/h	54	506	67	218	350	126	64	0	181	135	0	152
Grp Sat Flow(s),veh/h/ln	1856	1935	1591	1629	1697	1438	1750	0	1658	1709	0	1821
Q Serve(g_s), s	1.2	15.2	1.7	5.2	4.3	1.1	2.4	0.0	8.0	5.0	0.0	5.8
Cycle Q Clear(g_c), s	1.2	15.2	1.7	5.2	4.3	1.1	2.4	0.0	8.0	5.0	0.0	5.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.60	1.00		0.14
Lane Grp Cap(c), veh/h	605	825	769	451	833	852	290	0	177	269	0	276
V/C Ratio(X)	0.09	0.61	0.09	0.48	0.42	0.15	0.22	0.00	1.02	0.50	0.00	0.55
Avail Cap(c_a), veh/h	725	825	769	451	833	852	378	0	177	278	0	276
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.86	0.86	0.86	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.9	16.7	10.5	10.2	3.8	2.3	27.3	0.0	33.5	25.5	0.0	29.5
Incr Delay (d2), s/veh	0.1	3.4	0.2	0.7	1.3	0.3	0.4	0.0	74.0	1.4	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	6.7	0.6	1.4	1.3	0.3	1.0	0.0	6.8	2.0	0.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.0	20.1	10.7	10.9	5.2	2.6	27.7	0.0	107.5	26.9	0.0	31.8
LnGrp LOS	B	C	B	B	A	A	C	A	F	C	A	C
Approach Vol, veh/h		627			694			245			287	
Approach Delay, s/veh		18.3			6.5			86.7			29.5	
Approach LOS		B			A			F			C	

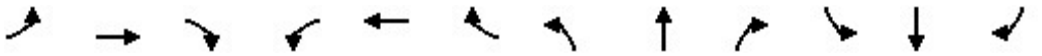
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	37.4	8.9	15.9	8.0	42.2	12.3	12.5
Change Period (Y+Rc), s	* 5.8	6.4	* 5.7	5.5	* 5.8	6.4	* 5.7	5.5
Max Green Setting (Gmax), s	* 7	30.6	* 7	7.0	* 7	30.6	* 7	7.0
Max Q Clear Time (g_c+I1), s	7.2	17.2	4.4	7.8	3.2	6.3	7.0	10.0
Green Ext Time (p_c), s	0.0	4.7	0.0	0.0	0.0	5.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	24.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



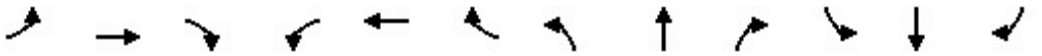
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	633	155	84	447	0	0	0	0	400	0	207
Future Volume (veh/h)	0	633	155	84	447	0	0	0	0	400	0	207
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1772	0				1860	1950	1860
Adj Flow Rate, veh/h	0	703	0	93	497	0				444	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	1	0	0	2	0				1	0	1
Cap, veh/h	0	811		273	1040	0				507	0	
Arrive On Green	0.00	0.45	0.00	0.06	0.59	0.00				0.27	0.00	0.00
Sat Flow, veh/h	0	1786	1525	1714	1772	0				1857	0	0
Grp Volume(v), veh/h	0	703	0	93	497	0				444	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1772	0				1857	0	0
Q Serve(g_s), s	0.0	26.6	0.0	2.0	12.1	0.0				17.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	26.6	0.0	2.0	12.1	0.0				17.1	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	811		273	1040	0				507	0	
V/C Ratio(X)	0.00	0.87		0.34	0.48	0.00				0.87	0.00	
Avail Cap(c_a), veh/h	0	811		354	1040	0				545	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.71	0.00	0.65	0.65	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	18.4	0.0	14.6	8.9	0.0				26.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	8.9	0.0	0.5	1.0	0.0				14.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.9	0.0	0.6	3.9	0.0				9.1	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	27.4	0.0	15.1	9.9	0.0				40.1	0.0	6.0
LnGrp LOS	A	C		B	A	A				D	A	A
Approach Vol, veh/h		703	A		590						674	A
Approach Delay, s/veh		27.4			10.7						28.5	
Approach LOS		C			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.0	39.5		25.5		49.5
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	28.0		21.0		41.5
Max Q Clear Time (g_c+I1), s	4.0	28.6		19.1		14.1
Green Ext Time (p_c), s	0.1	0.0		0.4		0.3

Intersection Summary	
HCM 6th Ctrl Delay	22.8
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	587	453	0	0	355	167	185	0	96	0	0	0
Future Volume (veh/h)	587	453	0	0	355	167	185	0	96	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1786	0	0	1772	1786	1823	1911	1795			
Adj Flow Rate, veh/h	683	527	0	0	413	0	215	0	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	1	1	0	0	2	1	1	0	3			
Cap, veh/h	755	1286	0	0	649		267	0				
Arrive On Green	0.19	0.48	0.00	0.00	0.37	0.00	0.15	0.00	0.00			
Sat Flow, veh/h	1701	1786	0	0	1772	1514	1820	0	0			
Grp Volume(v), veh/h	683	527	0	0	413	0	215	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1786	0	0	1772	1514	1820	0	0			
Q Serve(g_s), s	17.2	14.3	0.0	0.0	14.4	0.0	8.6	0.0	0.0			
Cycle Q Clear(g_c), s	17.2	14.3	0.0	0.0	14.4	0.0	8.6	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	755	1286	0	0	649		267	0				
V/C Ratio(X)	0.91	0.41	0.00	0.00	0.64		0.81	0.00				
Avail Cap(c_a), veh/h	834	1286	0	0	649		267	0				
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.25	0.25	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	14.2	9.1	0.0	0.0	19.6	0.0	31.0	0.0	0.0			
Incr Delay (d2), s/veh	3.8	0.2	0.0	0.0	4.7	0.0	16.4	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.8	5.4	0.0	0.0	6.2	0.0	4.8	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	17.9	9.4	0.0	0.0	24.3	0.0	47.3	0.0	6.0			
LnGrp LOS	B	A	A	A	C		D	A	A			
Approach Vol, veh/h		1210			413	A		327	A			
Approach Delay, s/veh		14.2			24.3			33.2				
Approach LOS		B			C			C				

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		59.0		16.0	26.5	32.5						
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0						
Max Green Setting (Gmax), s		53.0		10.0	24.0	23.0						
Max Q Clear Time (g_c+I1), s		16.3		10.6	19.2	16.4						
Green Ext Time (p_c), s		0.3		0.0	1.3	0.2						

Intersection Summary												
HCM 6th Ctrl Delay			19.5									
HCM 6th LOS			B									

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	367	92	249	251	134	78	81	224	229	139	103
Future Volume (veh/h)	127	367	92	249	251	134	78	81	224	229	139	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1935	1906	1711	1697	1697	1837	1837	1809	1794	1866	1794
Adj Flow Rate, veh/h	135	390	84	265	267	82	83	86	188	244	148	95
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	1	3	0	1	1	0	0	2	0	0	0
Cap, veh/h	549	622	134	394	712	603	309	89	194	292	244	156
Arrive On Green	0.07	0.40	0.40	0.09	0.42	0.42	0.06	0.17	0.17	0.12	0.23	0.23
Sat Flow, veh/h	1856	1543	332	1629	1697	1438	1750	513	1122	1709	1062	682
Grp Volume(v), veh/h	135	0	474	265	267	82	83	0	274	244	0	243
Grp Sat Flow(s),veh/h/ln	1856	0	1875	1629	1697	1438	1750	0	1635	1709	0	1744
Q Serve(g_s), s	3.7	0.0	18.2	8.0	9.8	3.2	3.4	0.0	15.0	10.3	0.0	11.2
Cycle Q Clear(g_c), s	3.7	0.0	18.2	8.0	9.8	3.2	3.4	0.0	15.0	10.3	0.0	11.2
Prop In Lane	1.00		0.18	1.00		1.00	1.00		0.69	1.00		0.39
Lane Grp Cap(c), veh/h	549	0	756	394	712	603	309	0	283	292	0	400
V/C Ratio(X)	0.25	0.00	0.63	0.67	0.38	0.14	0.27	0.00	0.97	0.83	0.00	0.61
Avail Cap(c_a), veh/h	580	0	756	394	712	603	352	0	283	292	0	400
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.8	0.0	21.4	17.9	18.0	16.1	27.7	0.0	36.9	26.3	0.0	31.1
Incr Delay (d2), s/veh	0.2	0.0	3.9	4.4	1.5	0.5	0.5	0.0	44.2	18.4	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	8.2	3.4	3.8	1.1	1.5	0.0	9.4	5.5	0.0	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.0	0.0	25.3	22.3	19.5	16.5	28.2	0.0	81.2	44.7	0.0	33.7
LnGrp LOS	B	A	C	C	B	B	C	A	F	D	A	C
Approach Vol, veh/h		609			614			357			487	
Approach Delay, s/veh		22.8			20.3			68.8			39.2	
Approach LOS		C			C			E			D	

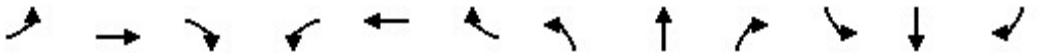
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	41.7	10.0	25.0	11.8	43.2	15.0	20.0
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 7	35.3	* 7	17.4	* 7	35.3	* 9.8	14.6
Max Q Clear Time (g_c+I1), s	10.0	20.2	5.4	13.2	5.7	11.8	12.3	17.0
Green Ext Time (p_c), s	0.0	4.2	0.0	0.3	0.0	3.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	33.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



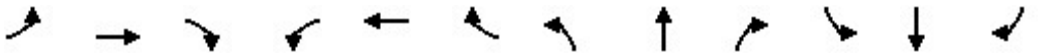
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	649	180	84	485	0	0	0	0	400	0	228
Future Volume (veh/h)	0	649	180	84	485	0	0	0	0	400	0	228
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1772	0				1860	1950	1860
Adj Flow Rate, veh/h	0	721	0	93	539	0				444	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	1	0	0	2	0				1	0	1
Cap, veh/h	0	885		281	1082	0				507	0	
Arrive On Green	0.00	0.50	0.00	0.07	0.81	0.00				0.27	0.00	0.00
Sat Flow, veh/h	0	1786	1525	1714	1772	0				1857	0	0
Grp Volume(v), veh/h	0	721	0	93	539	0				444	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1772	0				1857	0	0
Q Serve(g_s), s	0.0	30.7	0.0	2.2	8.6	0.0				20.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	30.7	0.0	2.2	8.6	0.0				20.6	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	885		281	1082	0				507	0	
V/C Ratio(X)	0.00	0.81		0.33	0.50	0.00				0.88	0.00	
Avail Cap(c_a), veh/h	0	885		341	1082	0				619	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.54	0.54	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	19.2	0.0	15.3	4.1	0.0				31.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	8.1	0.0	0.4	0.9	0.0				11.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	13.2	0.0	0.7	2.2	0.0				10.6	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	27.4	0.0	15.7	5.0	0.0				42.9	0.0	6.0
LnGrp LOS	A	C		B	A	A				D	A	A
Approach Vol, veh/h		721	A		632						591	A
Approach Delay, s/veh		27.4			6.6						33.7	
Approach LOS		C			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.3	50.1		29.6		60.4
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	35.0		29.0		48.5
Max Q Clear Time (g_c+I1), s	4.2	32.7		22.6		10.6
Green Ext Time (p_c), s	0.1	0.2		1.0		0.3

Intersection Summary	
HCM 6th Ctrl Delay	22.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	603	453	0	0	366	167	212	0	96	0	0	0
Future Volume (veh/h)	603	453	0	0	366	167	212	0	96	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1786	0	0	1772	1786	1823	1911	1795			
Adj Flow Rate, veh/h	701	527	0	0	426	0	247	0	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	1	1	0	0	2	1	1	0	3			
Cap, veh/h	757	1292	0	0	606		301	0				
Arrive On Green	0.22	0.48	0.00	0.00	0.34	0.00	0.17	0.00	0.00			
Sat Flow, veh/h	1701	1786	0	0	1772	1514	1820	0	0			
Grp Volume(v), veh/h	701	527	0	0	426	0	247	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1786	0	0	1772	1514	1820	0	0			
Q Serve(g_s), s	25.2	17.1	0.0	0.0	18.7	0.0	11.8	0.0	0.0			
Cycle Q Clear(g_c), s	25.2	17.1	0.0	0.0	18.7	0.0	11.8	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	757	1292	0	0	606		301	0				
V/C Ratio(X)	0.93	0.41	0.00	0.00	0.70		0.82	0.00				
Avail Cap(c_a), veh/h	807	1292	0	0	606		324	0				
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.23	0.23	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	20.8	10.8	0.0	0.0	25.7	0.0	36.3	0.0	0.0			
Incr Delay (d2), s/veh	4.7	0.2	0.0	0.0	6.7	0.0	14.6	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	10.8	7.1	0.0	0.0	8.5	0.0	6.4	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	25.5	11.0	0.0	0.0	32.4	0.0	50.9	0.0	6.0			
LnGrp LOS	C	B	A	A	C		D	A	A			
Approach Vol, veh/h		1228			426	A		359	A			
Approach Delay, s/veh		19.3			32.4			36.9				
Approach LOS		B			C			D				

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		70.1		19.9	34.4	35.8						
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0						
Max Green Setting (Gmax), s		63.0		15.0	31.0	26.0						
Max Q Clear Time (g_c+I1), s		19.1		13.8	27.2	20.7						
Green Ext Time (p_c), s		0.3		0.1	1.1	0.1						

Intersection Summary	
HCM 6th Ctrl Delay	25.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	399	99	249	261	134	80	81	224	229	139	104
Future Volume (veh/h)	130	399	99	249	261	134	80	81	224	229	139	104
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1935	1906	1711	1697	1697	1837	1837	1809	1794	1866	1794
Adj Flow Rate, veh/h	138	424	91	265	278	82	85	86	188	244	148	96
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	1	3	0	1	1	0	0	2	0	0	0
Cap, veh/h	534	770	748	410	700	774	314	88	193	301	246	159
Arrive On Green	0.07	0.40	0.40	0.09	0.41	0.41	0.07	0.17	0.17	0.13	0.23	0.23
Sat Flow, veh/h	1856	1935	1616	1629	1697	1438	1750	513	1122	1709	1057	686
Grp Volume(v), veh/h	138	424	91	265	278	82	85	0	274	244	0	244
Grp Sat Flow(s),veh/h/ln	1856	1935	1616	1629	1697	1438	1750	0	1635	1709	0	1743
Q Serve(g_s), s	3.8	15.2	2.9	8.0	10.4	2.5	3.5	0.0	15.0	10.2	0.0	11.2
Cycle Q Clear(g_c), s	3.8	15.2	2.9	8.0	10.4	2.5	3.5	0.0	15.0	10.2	0.0	11.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.69	1.00		0.39
Lane Grp Cap(c), veh/h	534	770	748	410	700	774	314	0	282	301	0	405
V/C Ratio(X)	0.26	0.55	0.12	0.65	0.40	0.11	0.27	0.00	0.97	0.81	0.00	0.60
Avail Cap(c_a), veh/h	562	770	748	410	700	774	356	0	282	301	0	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.1	20.9	13.8	17.4	18.6	10.2	27.7	0.0	37.0	26.0	0.0	30.8
Incr Delay (d2), s/veh	0.3	2.8	0.3	3.5	1.7	0.3	0.5	0.0	46.0	15.4	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	7.0	1.1	3.4	4.1	0.8	1.5	0.0	9.5	5.2	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.3	23.7	14.1	20.9	20.3	10.5	28.2	0.0	83.1	41.4	0.0	33.3
LnGrp LOS	B	C	B	C	C	B	C	A	F	D	A	C
Approach Vol, veh/h		653			625			359			488	
Approach Delay, s/veh		20.4			19.2			70.1			37.4	
Approach LOS		C			B			E			D	

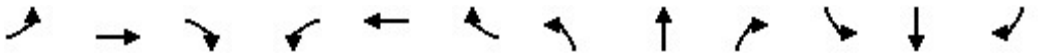
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	41.2	10.6	25.4	11.5	42.5	16.0	20.0
Change Period (Y+Rc), s	* 5.8	6.4	* 5.7	5.5	* 5.8	6.4	* 5.7	5.5
Max Green Setting (Gmax), s	* 7	34.8	* 7	17.8	* 7	34.8	* 10	14.5
Max Q Clear Time (g_c+I1), s	10.0	17.2	5.5	13.2	5.8	12.4	12.2	17.0
Green Ext Time (p_c), s	0.0	4.8	0.0	0.3	0.0	3.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	32.3
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



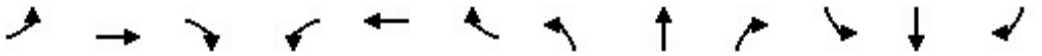
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	677	184	84	491	0	0	0	0	400	0	232
Future Volume (veh/h)	0	677	184	84	491	0	0	0	0	400	0	232
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1786	1786	1772	0				1860	1950	1860
Adj Flow Rate, veh/h	0	752	0	93	546	0				444	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	1	1	1	2	0				1	0	1
Cap, veh/h	0	886		260	1083	0				505	0	
Arrive On Green	0.00	0.50	0.00	0.07	0.81	0.00				0.27	0.00	0.00
Sat Flow, veh/h	0	1786	1514	1701	1772	0				1857	0	0
Grp Volume(v), veh/h	0	752	0	93	546	0				444	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1514	1701	1772	0				1857	0	0
Q Serve(g_s), s	0.0	33.0	0.0	2.2	8.8	0.0				20.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	33.0	0.0	2.2	8.8	0.0				20.6	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	886		260	1083	0				505	0	
V/C Ratio(X)	0.00	0.85		0.36	0.50	0.00				0.88	0.00	
Avail Cap(c_a), veh/h	0	886		319	1083	0				598	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.44	0.44	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	19.7	0.0	16.2	4.1	0.0				31.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	9.9	0.0	0.4	0.7	0.0				12.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	15.1	0.0	0.7	2.2	0.0				10.7	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	29.6	0.0	16.6	4.8	0.0				43.9	0.0	6.0
LnGrp LOS	A	C		B	A	A				D	A	A
Approach Vol, veh/h		752	A		639						596	A
Approach Delay, s/veh		29.6			6.5						34.3	
Approach LOS		C			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.4	50.2		29.5		60.5
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	36.0		28.0		49.5
Max Q Clear Time (g_c+I1), s	4.2	35.0		22.6		10.8
Green Ext Time (p_c), s	0.1	0.1		0.9		0.3

Intersection Summary	
HCM 6th Ctrl Delay	23.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



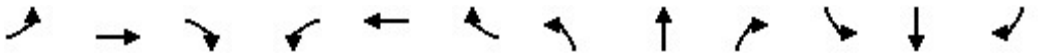
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	619	465	0	0	370	167	214	0	96	0	0	0
Future Volume (veh/h)	619	465	0	0	370	167	214	0	96	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1786	0	0	1772	1786	1823	1911	1795			
Adj Flow Rate, veh/h	720	541	0	0	430	0	249	0	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	1	1	0	0	2	1	1	0	3			
Cap, veh/h	768	1291	0	0	552		303	0				
Arrive On Green	0.24	0.48	0.00	0.00	0.31	0.00	0.17	0.00	0.00			
Sat Flow, veh/h	1701	1786	0	0	1772	1514	1820	0	0			
Grp Volume(v), veh/h	720	541	0	0	430	0	249	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1786	0	0	1772	1514	1820	0	0			
Q Serve(g_s), s	28.5	17.6	0.0	0.0	19.9	0.0	11.9	0.0	0.0			
Cycle Q Clear(g_c), s	28.5	17.6	0.0	0.0	19.9	0.0	11.9	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	768	1291	0	0	552		303	0				
V/C Ratio(X)	0.94	0.42	0.00	0.00	0.78		0.82	0.00				
Avail Cap(c_a), veh/h	787	1291	0	0	552		324	0				
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.19	0.19	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	22.9	11.0	0.0	0.0	28.2	0.0	36.2	0.0	0.0			
Incr Delay (d2), s/veh	4.9	0.2	0.0	0.0	10.4	0.0	14.9	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	16.3	7.3	0.0	0.0	9.5	0.0	6.4	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	27.8	11.2	0.0	0.0	38.6	0.0	51.1	0.0	6.0			
LnGrp LOS	C	B	A	A	D		D	A	A			
Approach Vol, veh/h		1261			430	A		361	A			
Approach Delay, s/veh		20.7			38.6			37.1				
Approach LOS		C			D			D				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		70.0		20.0	37.0	33.0			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		63.0		15.0	32.0	25.0			
Max Q Clear Time (g_c+I1), s		19.6		13.9	30.5	21.9			
Green Ext Time (p_c), s		0.3		0.1	0.5	0.1			

Intersection Summary		
HCM 6th Ctrl Delay	27.3	
HCM 6th LOS	C	

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	399	99	249	261	134	80	81	224	229	139	104
Future Volume (veh/h)	130	399	99	249	261	134	80	81	224	229	139	104
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1935	1906	1711	1697	1697	1837	1837	1809	1794	1866	1794
Adj Flow Rate, veh/h	138	424	91	265	278	82	85	86	188	244	148	96
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	1	3	0	1	1	0	0	2	0	0	0
Cap, veh/h	554	1053	224	515	685	742	282	271	436	399	201	130
Arrive On Green	0.08	0.35	0.35	0.14	0.40	0.40	0.07	0.15	0.15	0.11	0.19	0.19
Sat Flow, veh/h	1856	3015	642	1629	1697	1438	1750	1837	1533	1709	1057	686
Grp Volume(v), veh/h	138	257	258	265	278	82	85	86	188	244	0	244
Grp Sat Flow(s),veh/h/ln	1856	1838	1819	1629	1697	1438	1750	1837	1533	1709	0	1743
Q Serve(g_s), s	3.4	7.9	8.1	7.2	8.8	2.2	3.0	3.1	7.5	8.4	0.0	9.9
Cycle Q Clear(g_c), s	3.4	7.9	8.1	7.2	8.8	2.2	3.0	3.1	7.5	8.4	0.0	9.9
Prop In Lane	1.00		0.35	1.00		1.00	1.00		1.00	1.00		0.39
Lane Grp Cap(c), veh/h	554	642	635	515	685	742	282	271	436	399	0	332
V/C Ratio(X)	0.25	0.40	0.41	0.51	0.41	0.11	0.30	0.32	0.43	0.61	0.00	0.74
Avail Cap(c_a), veh/h	599	642	635	537	685	742	348	419	559	399	0	407
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.3	18.5	18.5	11.9	15.9	9.3	24.5	28.6	21.9	23.9	0.0	28.6
Incr Delay (d2), s/veh	0.2	1.9	1.9	0.8	1.8	0.3	0.6	0.7	0.7	2.7	0.0	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	3.4	3.4	2.3	3.4	0.7	1.3	1.4	2.7	3.8	0.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	20.3	20.4	12.7	17.7	9.6	25.1	29.3	22.6	26.6	0.0	34.0
LnGrp LOS	B	C	C	B	B	A	C	C	C	C	A	C
Approach Vol, veh/h		653			625			359			488	
Approach Delay, s/veh		18.9			14.5			24.8			30.3	
Approach LOS		B			B			C			C	

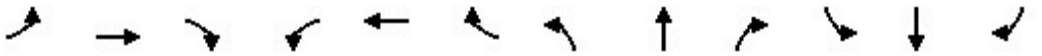
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	31.6	9.8	18.7	10.9	35.7	13.0	15.4
Change Period (Y+Rc), s	5.7	6.4	5.6	* 5.4	5.7	6.4	5.6	* 5.4
Max Green Setting (Gmax), s	10.3	18.1	7.0	* 17	7.0	21.4	7.4	* 16
Max Q Clear Time (g_c+I1), s	9.2	10.1	5.0	11.9	5.4	10.8	10.4	9.5
Green Ext Time (p_c), s	0.1	2.9	0.0	0.3	0.1	2.4	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	21.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



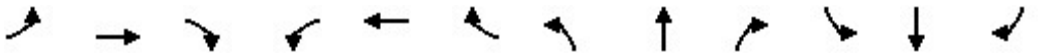
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	677	184	84	491	0	0	0	0	400	0	232
Future Volume (veh/h)	0	677	184	84	491	0	0	0	0	400	0	232
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1772	0				1860	1950	1860
Adj Flow Rate, veh/h	0	752	0	93	546	0				444	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	1	0	0	2	0				1	0	1
Cap, veh/h	0	1399		383	1024	0				523	0	
Arrive On Green	0.00	0.44	0.00	0.06	0.58	0.00				0.28	0.00	0.00
Sat Flow, veh/h	0	3358	1525	1714	1772	0				1857	0	0
Grp Volume(v), veh/h	0	752	0	93	546	0				444	0	0
Grp Sat Flow(s),veh/h/ln	0	1572	1525	1714	1772	0				1857	0	0
Q Serve(g_s), s	0.0	13.1	0.0	2.0	14.1	0.0				16.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	13.1	0.0	2.0	14.1	0.0				16.9	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1399		383	1024	0				523	0	
V/C Ratio(X)	0.00	0.54		0.24	0.53	0.00				0.85	0.00	
Avail Cap(c_a), veh/h	0	1399		464	1024	0				718	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.44	0.44	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	15.2	0.0	10.5	9.7	0.0				25.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.5	0.0	0.1	0.9	0.0				7.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.6	0.0	0.6	4.5	0.0				8.1	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	16.7	0.0	10.6	10.5	0.0				32.4	0.0	6.0
LnGrp LOS	A	B		B	B	A				C	A	A
Approach Vol, veh/h		752	A		639						596	A
Approach Delay, s/veh		16.7			10.5						25.7	
Approach LOS		B			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.0	38.9		26.1		48.9
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	21.0		28.0		34.5
Max Q Clear Time (g_c+I1), s	4.0	15.1		18.9		16.1
Green Ext Time (p_c), s	0.1	0.6		1.2		0.3

Intersection Summary	
HCM 6th Ctrl Delay	17.4
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	619	465	0	0	370	167	214	0	96	0	0	0
Future Volume (veh/h)	619	465	0	0	370	167	214	0	96	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1786	0	0	1772	1786	1823	1911	1795			
Adj Flow Rate, veh/h	720	541	0	0	430	0	249	0	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	1	1	0	0	2	1	1	0	3			
Cap, veh/h	747	1262	0	0	520		291	0				
Arrive On Green	0.46	0.94	0.00	0.00	0.29	0.00	0.16	0.00	0.00			
Sat Flow, veh/h	1701	1786	0	0	1772	1514	1820	0	0			
Grp Volume(v), veh/h	720	541	0	0	430	0	249	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1786	0	0	1772	1514	1820	0	0			
Q Serve(g_s), s	23.3	2.3	0.0	0.0	17.0	0.0	10.0	0.0	0.0			
Cycle Q Clear(g_c), s	23.3	2.3	0.0	0.0	17.0	0.0	10.0	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	747	1262	0	0	520		291	0				
V/C Ratio(X)	0.96	0.43	0.00	0.00	0.83		0.86	0.00				
Avail Cap(c_a), veh/h	747	1262	0	0	520		291	0				
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.65	0.65	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	11.3	0.7	0.0	0.0	24.7	0.0	30.7	0.0	0.0			
Incr Delay (d2), s/veh	18.5	0.7	0.0	0.0	14.0	0.0	21.3	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	8.2	0.6	0.0	0.0	8.5	0.0	5.9	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	29.8	1.4	0.0	0.0	38.8	0.0	51.9	0.0	6.0			
LnGrp LOS	C	A	A	A	D		D	A	A			
Approach Vol, veh/h		1261			430	A		361	A			
Approach Delay, s/veh		17.6			38.8			37.7				
Approach LOS		B			D			D				

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		58.0		17.0	31.0	27.0						
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0						
Max Green Setting (Gmax), s		52.0		11.0	25.0	21.0						
Max Q Clear Time (g_c+I1), s		4.3		12.0	25.3	19.0						
Green Ext Time (p_c), s		0.3		0.0	0.0	0.1						

Intersection Summary												
HCM 6th Ctrl Delay			25.6									
HCM 6th LOS			C									

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	296	46	80	330	118	56	61	117	114	83	34
Future Volume (veh/h)	28	296	46	80	330	118	56	61	117	114	83	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1949	1949	1711	1711	1711	1837	1837	1837	1794	1866	1794
Adj Flow Rate, veh/h	30	315	35	85	351	65	60	65	74	121	88	21
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	658	811	90	540	849	720	332	95	109	308	234	56
Arrive On Green	0.03	0.47	0.47	0.11	0.99	0.99	0.05	0.12	0.12	0.09	0.16	0.16
Sat Flow, veh/h	1856	1723	191	1629	1711	1450	1750	784	893	1709	1456	347
Grp Volume(v), veh/h	30	0	350	85	351	65	60	0	139	121	0	109
Grp Sat Flow(s),veh/h/ln	1856	0	1915	1629	1711	1450	1750	0	1677	1709	0	1804
Q Serve(g_s), s	0.6	0.0	8.9	1.9	0.2	0.0	2.2	0.0	6.0	4.4	0.0	4.0
Cycle Q Clear(g_c), s	0.6	0.0	8.9	1.9	0.2	0.0	2.2	0.0	6.0	4.4	0.0	4.0
Prop In Lane	1.00		0.10	1.00		1.00	1.00		0.53	1.00		0.19
Lane Grp Cap(c), veh/h	658	0	902	540	849	720	332	0	204	308	0	290
V/C Ratio(X)	0.05	0.00	0.39	0.16	0.41	0.09	0.18	0.00	0.68	0.39	0.00	0.38
Avail Cap(c_a), veh/h	789	0	902	614	849	720	444	0	326	350	0	351
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.90	0.90	0.90	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.4	0.0	12.8	8.8	0.1	0.1	26.4	0.0	31.5	24.6	0.0	28.1
Incr Delay (d2), s/veh	0.0	0.0	1.3	0.1	1.3	0.2	0.3	0.0	4.0	0.8	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	3.6	0.6	0.4	0.1	0.9	0.0	2.6	1.8	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.4	0.0	14.1	8.9	1.5	0.4	26.7	0.0	35.5	25.4	0.0	28.9
LnGrp LOS	A	A	B	A	A	A	C	A	D	C	A	C
Approach Vol, veh/h		380			501			199			230	
Approach Delay, s/veh		13.7			2.6			32.8			27.1	
Approach LOS		B			A			C			C	

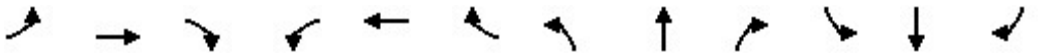
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	40.7	8.2	16.5	7.7	42.6	11.2	13.5
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 6.7	23.6	* 7.8	13.6	* 6.7	23.6	* 7.8	13.6
Max Q Clear Time (g_c+I1), s	3.9	10.9	4.2	6.0	2.6	2.2	6.4	8.0
Green Ext Time (p_c), s	0.0	2.6	0.0	0.1	0.0	4.1	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	14.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



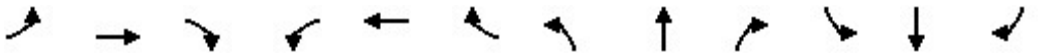
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	454	46	66	480	0	0	0	0	174	2	70
Future Volume (veh/h)	0	454	46	66	480	0	0	0	0	174	2	70
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1800	0				1860	1950	1860
Adj Flow Rate, veh/h	0	499	0	73	527	0				191	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	1	0	0	0	0				1	0	1
Cap, veh/h	0	1054		584	1293	0				260	3	
Arrive On Green	0.00	0.59	0.00	0.11	1.00	0.00				0.14	0.14	0.00
Sat Flow, veh/h	0	1786	1525	1714	1800	0				1838	19	0
Grp Volume(v), veh/h	0	499	0	73	527	0				193	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1800	0				1858	0	0
Q Serve(g_s), s	0.0	11.9	0.0	1.1	0.0	0.0				7.5	0.0	0.0
Cycle Q Clear(g_c), s	0.0	11.9	0.0	1.1	0.0	0.0				7.5	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h	0	1054		584	1293	0				263	0	
V/C Ratio(X)	0.00	0.47		0.12	0.41	0.00				0.73	0.00	
Avail Cap(c_a), veh/h	0	1054		661	1293	0				421	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.89	0.00	0.90	0.90	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.7	0.0	5.3	0.0	0.0				30.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.4	0.0	0.1	0.9	0.0				4.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.0	0.0	0.3	0.3	0.0				3.5	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	10.1	0.0	5.4	0.9	0.0				34.8	0.0	6.0
LnGrp LOS	A	B		A	A	A				C	A	A
Approach Vol, veh/h		499	A		600						270	A
Approach Delay, s/veh		10.1			1.4						26.6	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.6	49.8		15.6		59.4
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	6.5	33.5		16.0		46.5
Max Q Clear Time (g_c+I1), s	3.1	13.9		9.5		2.0
Green Ext Time (p_c), s	0.0	0.3		0.3		0.3

Intersection Summary	
HCM 6th Ctrl Delay	9.5
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



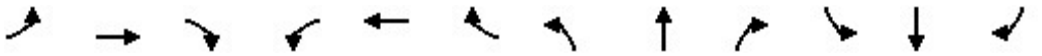
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	506	0	0	407	208	137	1	42	0	0	0
Future Volume (veh/h)	124	506	0	0	407	208	137	1	42	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1772	1800	0	0	1800	1800	1837	1911	1837			
Adj Flow Rate, veh/h	132	538	0	0	433	0	146	1	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	2	0	0	0	0	0	0	0	0			
Cap, veh/h	681	1352	0	0	1118		209	1				
Arrive On Green	0.13	1.00	0.00	0.00	0.62	0.00	0.12	0.12	0.00			
Sat Flow, veh/h	1688	1800	0	0	1800	1525	1808	12	0			
Grp Volume(v), veh/h	132	538	0	0	433	0	147	0	0			
Grp Sat Flow(s),veh/h/ln	1688	1800	0	0	1800	1525	1820	0	0			
Q Serve(g_s), s	1.9	0.0	0.0	0.0	9.0	0.0	5.8	0.0	0.0			
Cycle Q Clear(g_c), s	1.9	0.0	0.0	0.0	9.0	0.0	5.8	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		0.00			
Lane Grp Cap(c), veh/h	681	1352	0	0	1118		211	0				
V/C Ratio(X)	0.19	0.40	0.00	0.00	0.39		0.70	0.00				
Avail Cap(c_a), veh/h	777	1352	0	0	1118		388	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.83	0.83	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	4.0	0.0	0.0	0.0	7.1	0.0	31.9	0.0	0.0			
Incr Delay (d2), s/veh	0.1	0.7	0.0	0.0	1.0	0.0	4.1	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.4	0.3	0.0	0.0	2.9	0.0	2.7	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	4.2	0.7	0.0	0.0	8.1	0.0	36.0	0.0	6.0			
LnGrp LOS	A	A	A	A	A		D	A	A			
Approach Vol, veh/h		670			433	A		192	A			
Approach Delay, s/veh		1.4			8.1			29.0				
Approach LOS		A			A			C				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		61.3		13.7	9.7	51.6			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		48.0		15.0	8.0	34.0			
Max Q Clear Time (g_c+I1), s		2.0		7.8	3.9	11.0			
Green Ext Time (p_c), s		0.3		0.2	0.1	0.2			

Intersection Summary		
HCM 6th Ctrl Delay	7.7	
HCM 6th LOS	A	

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	300	47	81	335	120	57	62	119	116	84	35
Future Volume (veh/h)	28	300	47	81	335	120	57	62	119	116	84	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1949	1949	1711	1711	1711	1837	1837	1837	1794	1866	1794
Adj Flow Rate, veh/h	30	319	36	86	356	67	61	66	77	123	89	22
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	669	833	94	553	872	739	312	82	96	287	212	52
Arrive On Green	0.03	0.48	0.48	0.11	1.00	1.00	0.05	0.11	0.11	0.09	0.15	0.15
Sat Flow, veh/h	1856	1720	194	1629	1711	1450	1750	773	902	1709	1445	357
Grp Volume(v), veh/h	30	0	355	86	356	67	61	0	143	123	0	111
Grp Sat Flow(s),veh/h/ln	1856	0	1914	1629	1711	1450	1750	0	1675	1709	0	1802
Q Serve(g_s), s	0.6	0.0	8.8	1.9	0.0	0.0	2.3	0.0	6.3	4.6	0.0	4.2
Cycle Q Clear(g_c), s	0.6	0.0	8.8	1.9	0.0	0.0	2.3	0.0	6.3	4.6	0.0	4.2
Prop In Lane	1.00		0.10	1.00		1.00	1.00		0.54	1.00		0.20
Lane Grp Cap(c), veh/h	669	0	927	553	872	739	312	0	179	287	0	264
V/C Ratio(X)	0.04	0.00	0.38	0.16	0.41	0.09	0.20	0.00	0.80	0.43	0.00	0.42
Avail Cap(c_a), veh/h	808	0	927	633	872	739	403	0	179	308	0	264
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.89	0.89	0.89	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.9	0.0	12.2	8.3	0.0	0.0	27.3	0.0	32.7	25.5	0.0	29.1
Incr Delay (d2), s/veh	0.0	0.0	1.2	0.1	1.3	0.2	0.3	0.0	22.2	1.0	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	3.5	0.5	0.3	0.0	1.0	0.0	3.6	1.8	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.9	0.0	13.4	8.5	1.3	0.2	27.6	0.0	55.0	26.5	0.0	30.2
LnGrp LOS	A	A	B	A	A	A	C	A	D	C	A	C
Approach Vol, veh/h		385			509			204			234	
Approach Delay, s/veh		13.1			2.3			46.8			28.2	
Approach LOS		B			A			D			C	

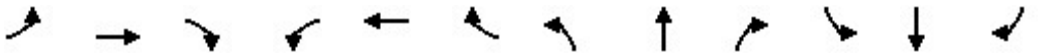
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	41.7	8.3	15.4	7.7	43.6	11.3	12.4
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 7	30.7	* 7	7.0	* 7	30.7	* 7	7.0
Max Q Clear Time (g_c+I1), s	3.9	10.8	4.3	6.2	2.6	2.0	6.6	8.3
Green Ext Time (p_c), s	0.0	3.4	0.0	0.0	0.0	4.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



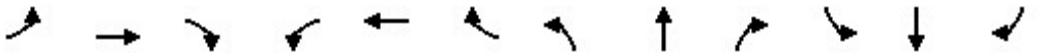
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	461	47	67	487	0	0	0	0	177	2	71
Future Volume (veh/h)	0	461	47	67	487	0	0	0	0	177	2	71
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1800	0				1860	1950	1860
Adj Flow Rate, veh/h	0	507	0	74	535	0				195	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	1	0	0	0	0				1	0	1
Cap, veh/h	0	1049		575	1288	0				265	3	
Arrive On Green	0.00	0.59	0.00	0.11	1.00	0.00				0.14	0.14	0.00
Sat Flow, veh/h	0	1786	1525	1714	1800	0				1839	19	0
Grp Volume(v), veh/h	0	507	0	74	535	0				197	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1800	0				1858	0	0
Q Serve(g_s), s	0.0	12.3	0.0	1.1	0.0	0.0				7.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	12.3	0.0	1.1	0.0	0.0				7.6	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h	0	1049		575	1288	0				268	0	
V/C Ratio(X)	0.00	0.48		0.13	0.42	0.00				0.74	0.00	
Avail Cap(c_a), veh/h	0	1049		663	1288	0				446	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.89	0.00	0.90	0.90	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.9	0.0	5.4	0.0	0.0				30.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.4	0.0	0.1	0.9	0.0				3.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.1	0.0	0.3	0.3	0.0				3.6	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	10.3	0.0	5.5	0.9	0.0				34.6	0.0	6.0
LnGrp LOS	A	B		A	A	A				C	A	A
Approach Vol, veh/h		507	A		609						275	A
Approach Delay, s/veh		10.3			1.5						26.5	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.6	49.5		15.8		59.2
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	32.0		17.0		45.5
Max Q Clear Time (g_c+I1), s	3.1	14.3		9.6		2.0
Green Ext Time (p_c), s	0.0	0.3		0.4		0.3

Intersection Summary	
HCM 6th Ctrl Delay	9.6
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	514	0	0	413	211	139	1	43	0	0	0
Future Volume (veh/h)	126	514	0	0	413	211	139	1	43	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1772	1800	0	0	1800	1800	1837	1911	1837			
Adj Flow Rate, veh/h	134	547	0	0	439	0	148	1	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	2	0	0	0	0	0	0	0	0			
Cap, veh/h	675	1349	0	0	1115		211	1				
Arrive On Green	0.13	1.00	0.00	0.00	0.62	0.00	0.12	0.12	0.00			
Sat Flow, veh/h	1688	1800	0	0	1800	1525	1808	12	0			
Grp Volume(v), veh/h	134	547	0	0	439	0	149	0	0			
Grp Sat Flow(s),veh/h/ln	1688	1800	0	0	1800	1525	1820	0	0			
Q Serve(g_s), s	1.9	0.0	0.0	0.0	9.2	0.0	5.9	0.0	0.0			
Cycle Q Clear(g_c), s	1.9	0.0	0.0	0.0	9.2	0.0	5.9	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		0.00			
Lane Grp Cap(c), veh/h	675	1349	0	0	1115		213	0				
V/C Ratio(X)	0.20	0.41	0.00	0.00	0.39		0.70	0.00				
Avail Cap(c_a), veh/h	748	1349	0	0	1115		388	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.81	0.81	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	4.1	0.0	0.0	0.0	7.2	0.0	31.8	0.0	0.0			
Incr Delay (d2), s/veh	0.1	0.7	0.0	0.0	1.0	0.0	4.1	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.4	0.3	0.0	0.0	3.0	0.0	2.8	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	4.2	0.7	0.0	0.0	8.2	0.0	36.0	0.0	6.0			
LnGrp LOS	A	A	A	A	A		D	A	A			
Approach Vol, veh/h		681			439	A		195	A			
Approach Delay, s/veh		1.4			8.2			28.9				
Approach LOS		A			A			C				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		61.2		13.8	9.8	51.5			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		48.0		15.0	7.0	35.0			
Max Q Clear Time (g_c+I1), s		2.0		7.9	3.9	11.2			
Green Ext Time (p_c), s		0.3		0.2	0.1	0.2			

Intersection Summary		
HCM 6th Ctrl Delay	7.8	
HCM 6th LOS	A	

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	300	47	81	335	120	57	62	119	116	84	35
Future Volume (veh/h)	28	300	47	81	335	120	57	62	119	116	84	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1949	1949	1711	1711	1711	1837	1837	1837	1794	1866	1794
Adj Flow Rate, veh/h	30	319	36	86	356	67	61	66	77	123	89	22
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	667	940	887	567	869	874	312	82	96	288	212	53
Arrive On Green	0.03	0.48	0.48	0.11	1.00	1.00	0.05	0.11	0.11	0.09	0.15	0.15
Sat Flow, veh/h	1856	1949	1652	1629	1711	1450	1750	773	902	1709	1445	357
Grp Volume(v), veh/h	30	319	36	86	356	67	61	0	143	123	0	111
Grp Sat Flow(s),veh/h/ln	1856	1949	1652	1629	1711	1450	1750	0	1675	1709	0	1802
Q Serve(g_s), s	0.6	7.6	0.8	1.9	0.0	0.0	2.3	0.0	6.3	4.6	0.0	4.2
Cycle Q Clear(g_c), s	0.6	7.6	0.8	1.9	0.0	0.0	2.3	0.0	6.3	4.6	0.0	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.54	1.00		0.20
Lane Grp Cap(c), veh/h	667	940	887	567	869	874	312	0	179	288	0	265
V/C Ratio(X)	0.04	0.34	0.04	0.15	0.41	0.08	0.20	0.00	0.80	0.43	0.00	0.42
Avail Cap(c_a), veh/h	806	940	887	647	869	874	404	0	179	308	0	265
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.89	0.89	0.89	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.0	12.0	8.2	8.3	0.0	0.0	27.3	0.0	32.7	25.8	0.0	29.1
Incr Delay (d2), s/veh	0.0	1.0	0.1	0.1	1.3	0.2	0.3	0.0	22.2	1.0	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.1	0.3	0.5	0.3	0.0	1.0	0.0	3.6	1.9	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.0	13.0	8.3	8.4	1.3	0.2	27.6	0.0	55.0	26.8	0.0	30.1
LnGrp LOS	A	B	A	A	A	A	C	A	D	C	A	C
Approach Vol, veh/h		385			509			204			234	
Approach Delay, s/veh		12.2			2.3			46.8			28.4	
Approach LOS		B			A			D			C	

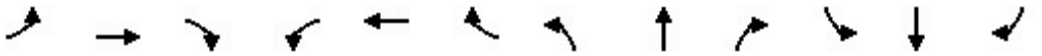
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	41.6	8.8	15.5	7.2	43.5	11.8	12.5
Change Period (Y+Rc), s	* 5.8	6.4	* 5.7	5.5	* 5.8	6.4	* 5.7	5.5
Max Green Setting (Gmax), s	* 7	30.6	* 7	7.0	* 7	30.6	* 7	7.0
Max Q Clear Time (g_c+I1), s	3.9	9.6	4.3	6.2	2.6	2.0	6.6	8.3
Green Ext Time (p_c), s	0.0	3.4	0.0	0.0	0.0	4.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.6
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



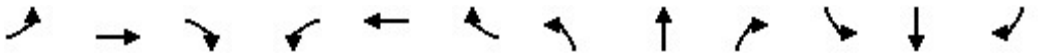
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	461	47	67	487	0	0	0	0	177	2	71
Future Volume (veh/h)	0	461	47	67	487	0	0	0	0	177	2	71
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1800	0				1860	1950	1860
Adj Flow Rate, veh/h	0	507	0	74	535	0				195	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	1	0	0	0	0				1	0	1
Cap, veh/h	0	1049		575	1288	0				265	3	
Arrive On Green	0.00	0.59	0.00	0.11	1.00	0.00				0.14	0.14	0.00
Sat Flow, veh/h	0	1786	1525	1714	1800	0				1839	19	0
Grp Volume(v), veh/h	0	507	0	74	535	0				197	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1800	0				1858	0	0
Q Serve(g_s), s	0.0	12.3	0.0	1.1	0.0	0.0				7.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	12.3	0.0	1.1	0.0	0.0				7.6	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h	0	1049		575	1288	0				268	0	
V/C Ratio(X)	0.00	0.48		0.13	0.42	0.00				0.74	0.00	
Avail Cap(c_a), veh/h	0	1049		663	1288	0				446	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.91	0.00	0.90	0.90	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.9	0.0	5.4	0.0	0.0				30.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.5	0.0	0.1	0.9	0.0				3.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.1	0.0	0.3	0.3	0.0				3.6	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	10.4	0.0	5.5	0.9	0.0				34.6	0.0	6.0
LnGrp LOS	A	B		A	A	A				C	A	A
Approach Vol, veh/h		507	A		609						275	A
Approach Delay, s/veh		10.4			1.5						26.5	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.6	49.5		15.8		59.2
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	31.5		17.0		45.5
Max Q Clear Time (g_c+I1), s	3.1	14.3		9.6		2.0
Green Ext Time (p_c), s	0.0	0.3		0.4		0.3

Intersection Summary	
HCM 6th Ctrl Delay	9.7
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



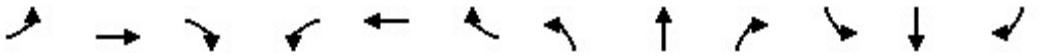
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	514	0	0	413	211	139	1	43	0	0	0
Future Volume (veh/h)	126	514	0	0	413	211	139	1	43	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1772	1800	0	0	1800	1800	1837	1911	1837			
Adj Flow Rate, veh/h	134	547	0	0	439	0	148	1	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	2	0	0	0	0	0	0	0	0			
Cap, veh/h	675	1349	0	0	1115		211	1				
Arrive On Green	0.13	1.00	0.00	0.00	0.62	0.00	0.12	0.12	0.00			
Sat Flow, veh/h	1688	1800	0	0	1800	1525	1808	12	0			
Grp Volume(v), veh/h	134	547	0	0	439	0	149	0	0			
Grp Sat Flow(s),veh/h/ln	1688	1800	0	0	1800	1525	1820	0	0			
Q Serve(g_s), s	1.9	0.0	0.0	0.0	9.2	0.0	5.9	0.0	0.0			
Cycle Q Clear(g_c), s	1.9	0.0	0.0	0.0	9.2	0.0	5.9	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		0.00			
Lane Grp Cap(c), veh/h	675	1349	0	0	1115		213	0				
V/C Ratio(X)	0.20	0.41	0.00	0.00	0.39		0.70	0.00				
Avail Cap(c_a), veh/h	748	1349	0	0	1115		388	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.81	0.81	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	4.1	0.0	0.0	0.0	7.2	0.0	31.8	0.0	0.0			
Incr Delay (d2), s/veh	0.1	0.7	0.0	0.0	1.0	0.0	4.1	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.4	0.3	0.0	0.0	3.0	0.0	2.8	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	4.2	0.7	0.0	0.0	8.2	0.0	36.0	0.0	6.0			
LnGrp LOS	A	A	A	A	A		D	A	A			
Approach Vol, veh/h		681			439	A		195	A			
Approach Delay, s/veh		1.4			8.2			28.9				
Approach LOS		A			A			C				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		61.2		13.8	9.8	51.5			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		48.0		15.0	7.0	35.0			
Max Q Clear Time (g_c+I1), s		2.0		7.9	3.9	11.2			
Green Ext Time (p_c), s		0.3		0.2	0.1	0.2			

Intersection Summary	
HCM 6th Ctrl Delay	7.8
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	251	85	177	285	120	97	97	205	236	122	112
Future Volume (veh/h)	100	251	85	177	285	120	97	97	205	236	122	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1949	1949	1711	1711	1711	1837	1837	1837	1794	1866	1794
Adj Flow Rate, veh/h	106	267	64	188	303	66	103	103	131	251	130	70
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	518	595	143	490	722	611	345	118	150	327	240	129
Arrive On Green	0.06	0.39	0.39	0.09	0.42	0.42	0.08	0.16	0.16	0.13	0.21	0.21
Sat Flow, veh/h	1856	1519	364	1629	1711	1450	1750	735	934	1709	1141	614
Grp Volume(v), veh/h	106	0	331	188	303	66	103	0	234	251	0	200
Grp Sat Flow(s),veh/h/ln	1856	0	1883	1629	1711	1450	1750	0	1669	1709	0	1756
Q Serve(g_s), s	2.8	0.0	11.0	5.7	10.6	2.3	4.1	0.0	11.6	10.1	0.0	8.6
Cycle Q Clear(g_c), s	2.8	0.0	11.0	5.7	10.6	2.3	4.1	0.0	11.6	10.1	0.0	8.6
Prop In Lane	1.00		0.19	1.00		1.00	1.00		0.56	1.00		0.35
Lane Grp Cap(c), veh/h	518	0	738	490	722	611	345	0	267	327	0	369
V/C Ratio(X)	0.20	0.00	0.45	0.38	0.42	0.11	0.30	0.00	0.88	0.77	0.00	0.54
Avail Cap(c_a), veh/h	573	0	738	490	722	611	375	0	267	327	0	369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.8	0.0	19.1	13.6	17.3	14.9	26.4	0.0	34.9	25.0	0.0	29.9
Incr Delay (d2), s/veh	0.2	0.0	2.0	0.5	1.8	0.4	0.5	0.0	26.2	10.5	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	4.8	1.9	4.2	0.8	1.7	0.0	6.6	4.8	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.0	0.0	21.0	14.1	19.1	15.2	26.9	0.0	61.0	35.5	0.0	31.6
LnGrp LOS	B	A	C	B	B	B	C	A	E	D	A	C
Approach Vol, veh/h		437			557			337			451	
Approach Delay, s/veh		19.3			16.9			50.6			33.7	
Approach LOS		B			B			D			C	

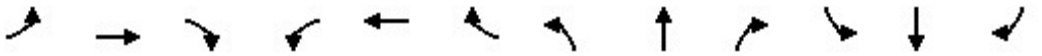
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	38.7	10.7	22.3	10.8	41.2	15.0	18.0
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 7	32.3	* 7	15.4	* 7	32.3	* 9.8	12.6
Max Q Clear Time (g_c+I1), s	7.7	13.0	6.1	10.6	4.8	12.6	12.1	13.6
Green Ext Time (p_c), s	0.0	3.1	0.0	0.2	0.0	3.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	28.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



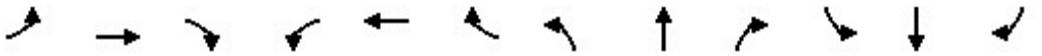
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	556	109	67	592	0	0	0	0	177	2	138
Future Volume (veh/h)	0	556	109	67	592	0	0	0	0	177	2	138
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1800	0				1860	1950	1860
Adj Flow Rate, veh/h	0	611	0	74	651	0				195	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	1	0	0	0	0				1	0	1
Cap, veh/h	0	1107		501	1323	0				260	3	
Arrive On Green	0.00	0.62	0.00	0.10	1.00	0.00				0.14	0.14	0.00
Sat Flow, veh/h	0	1786	1525	1714	1800	0				1839	19	0
Grp Volume(v), veh/h	0	611	0	74	651	0				197	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1800	0				1858	0	0
Q Serve(g_s), s	0.0	16.8	0.0	1.2	0.0	0.0				8.7	0.0	0.0
Cycle Q Clear(g_c), s	0.0	16.8	0.0	1.2	0.0	0.0				8.7	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h	0	1107		501	1323	0				262	0	
V/C Ratio(X)	0.00	0.55		0.15	0.49	0.00				0.75	0.00	
Avail Cap(c_a), veh/h	0	1107		575	1323	0				481	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.84	0.84	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	9.3	0.0	6.1	0.0	0.0				35.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.0	0.0	0.1	1.1	0.0				4.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.9	0.0	0.3	0.4	0.0				4.1	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	11.3	0.0	6.2	1.1	0.0				39.4	0.0	6.0
LnGrp LOS	A	B		A	A	A				D	A	A
Approach Vol, veh/h		611	A		725						349	A
Approach Delay, s/veh		11.3			1.6						24.8	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.8	58.2		17.0		68.0
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	38.0		21.0		51.5
Max Q Clear Time (g_c+I1), s	3.2	18.8		10.7		2.0
Green Ext Time (p_c), s	0.0	0.3		0.5		0.4

Intersection Summary	
HCM 6th Ctrl Delay	9.9
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	545	0	0	447	211	210	1	43	0	0	0
Future Volume (veh/h)	190	545	0	0	447	211	210	1	43	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1800	0	0	1800	1800	1837	1911	1837			
Adj Flow Rate, veh/h	202	580	0	0	476	0	223	1	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	1	0	0	0	0	0	0	0	0			
Cap, veh/h	604	1304	0	0	1053		286	1				
Arrive On Green	0.16	1.00	0.00	0.00	0.59	0.00	0.16	0.16	0.00			
Sat Flow, veh/h	1701	1800	0	0	1800	1525	1812	8	0			
Grp Volume(v), veh/h	202	580	0	0	476	0	224	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1800	0	0	1800	1525	1820	0	0			
Q Serve(g_s), s	3.8	0.0	0.0	0.0	12.7	0.0	10.0	0.0	0.0			
Cycle Q Clear(g_c), s	3.8	0.0	0.0	0.0	12.7	0.0	10.0	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	604	1304	0	0	1053		287	0				
V/C Ratio(X)	0.33	0.44	0.00	0.00	0.45		0.78	0.00				
Avail Cap(c_a), veh/h	647	1304	0	0	1053		450	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.70	0.70	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	5.7	0.0	0.0	0.0	9.9	0.0	34.4	0.0	0.0			
Incr Delay (d2), s/veh	0.2	0.8	0.0	0.0	1.4	0.0	4.6	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.9	0.3	0.0	0.0	4.6	0.0	4.7	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	6.0	0.8	0.0	0.0	11.3	0.0	38.9	0.0	6.0			
LnGrp LOS	A	A	A	A	B		D	A	A			
Approach Vol, veh/h		782			476	A		270	A			
Approach Delay, s/veh		2.1			11.3			33.3				
Approach LOS		A			B			C				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		66.6		18.4	11.8	54.7			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		53.0		20.0	8.0	39.0			
Max Q Clear Time (g_c+I1), s		2.0		12.0	5.8	14.7			
Green Ext Time (p_c), s		0.3		0.4	0.1	0.2			

Intersection Summary		
HCM 6th Ctrl Delay		10.5
HCM 6th LOS		B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	251	85	177	285	120	97	97	205	236	122	112
Future Volume (veh/h)	100	251	85	177	285	120	97	97	205	236	122	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1949	1949	1711	1711	1711	1837	1837	1837	1794	1866	1794
Adj Flow Rate, veh/h	106	267	64	188	303	66	103	103	131	251	130	70
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	499	770	776	500	715	818	374	125	159	364	276	149
Arrive On Green	0.06	0.40	0.40	0.08	0.42	0.42	0.07	0.17	0.17	0.15	0.24	0.24
Sat Flow, veh/h	1856	1949	1652	1629	1711	1450	1750	735	934	1709	1141	614
Grp Volume(v), veh/h	106	267	64	188	303	66	103	0	234	251	0	200
Grp Sat Flow(s),veh/h/ln	1856	1949	1652	1629	1711	1450	1750	0	1669	1709	0	1756
Q Serve(g_s), s	3.1	9.1	2.0	6.5	11.9	2.0	4.5	0.0	12.9	10.8	0.0	9.3
Cycle Q Clear(g_c), s	3.1	9.1	2.0	6.5	11.9	2.0	4.5	0.0	12.9	10.8	0.0	9.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.56	1.00		0.35
Lane Grp Cap(c), veh/h	499	770	776	500	715	818	374	0	284	364	0	425
V/C Ratio(X)	0.21	0.35	0.08	0.38	0.42	0.08	0.28	0.00	0.83	0.69	0.00	0.47
Avail Cap(c_a), veh/h	541	770	776	500	715	818	391	0	343	382	0	488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.4	20.1	13.9	15.1	19.6	9.4	28.9	0.0	38.1	25.9	0.0	30.8
Incr Delay (d2), s/veh	0.2	1.2	0.2	0.5	1.8	0.2	0.4	0.0	13.0	4.9	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	4.2	0.8	2.3	4.8	0.7	1.9	0.0	6.3	4.7	0.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.6	21.4	14.1	15.6	21.4	9.6	29.3	0.0	51.0	30.8	0.0	31.6
LnGrp LOS	B	C	B	B	C	A	C	A	D	C	A	C
Approach Vol, veh/h		437			557			337			451	
Approach Delay, s/veh		18.9			18.0			44.4			31.2	
Approach LOS		B			B			D			C	

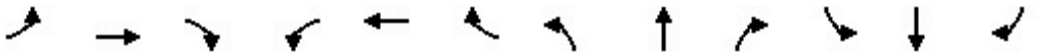
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	43.0	11.8	27.5	10.6	45.1	18.6	20.6
Change Period (Y+Rc), s	* 5.8	6.4	* 5.7	5.5	* 5.8	6.4	* 5.7	5.5
Max Green Setting (Gmax), s	* 7	32.2	* 7	25.4	* 7	32.2	* 14	18.5
Max Q Clear Time (g_c+I1), s	8.5	11.1	6.5	11.3	5.1	13.9	12.8	14.9
Green Ext Time (p_c), s	0.0	3.1	0.0	0.5	0.0	3.3	0.1	0.3

Intersection Summary	
HCM 6th Ctrl Delay	26.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



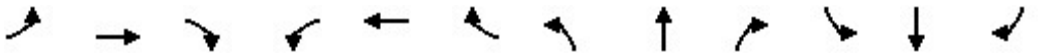
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	556	109	67	592	0	0	0	0	177	2	138
Future Volume (veh/h)	0	556	109	67	592	0	0	0	0	177	2	138
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1800	0				1860	1950	1860
Adj Flow Rate, veh/h	0	611	0	74	651	0				195	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	1	0	0	0	0				1	0	1
Cap, veh/h	0	1155		517	1352	0				254	3	
Arrive On Green	0.00	0.65	0.00	0.09	1.00	0.00				0.14	0.14	0.00
Sat Flow, veh/h	0	1786	1525	1714	1800	0				1839	19	0
Grp Volume(v), veh/h	0	611	0	74	651	0				197	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1800	0				1858	0	0
Q Serve(g_s), s	0.0	17.5	0.0	1.2	0.0	0.0				9.7	0.0	0.0
Cycle Q Clear(g_c), s	0.0	17.5	0.0	1.2	0.0	0.0				9.7	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h	0	1155		517	1352	0				257	0	
V/C Ratio(X)	0.00	0.53		0.14	0.48	0.00				0.77	0.00	
Avail Cap(c_a), veh/h	0	1155		581	1352	0				489	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.86	0.86	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	9.0	0.0	5.9	0.0	0.0				39.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.7	0.0	0.1	1.1	0.0				4.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.1	0.0	0.3	0.4	0.0				4.7	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	10.8	0.0	6.0	1.1	0.0				44.2	0.0	6.0
LnGrp LOS	A	B		A	A	A				D	A	A
Approach Vol, veh/h		611	A		725						349	A
Approach Delay, s/veh		10.8			1.6						27.6	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.9	66.9		18.1		76.9
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	45.0		24.0		58.5
Max Q Clear Time (g_c+I1), s	3.2	19.5		11.7		2.0
Green Ext Time (p_c), s	0.0	0.3		0.5		0.4

Intersection Summary	
HCM 6th Ctrl Delay	10.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



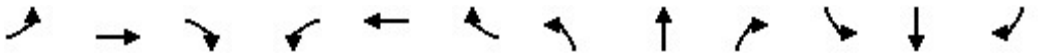
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	545	0	0	447	211	210	1	43	0	0	0
Future Volume (veh/h)	190	545	0	0	447	211	210	1	43	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1800	0	0	1800	1800	1837	1911	1837			
Adj Flow Rate, veh/h	202	580	0	0	476	0	223	1	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	1	0	0	0	0	0	0	0	0			
Cap, veh/h	618	1331	0	0	1101		281	1				
Arrive On Green	0.15	1.00	0.00	0.00	0.61	0.00	0.16	0.16	0.00			
Sat Flow, veh/h	1701	1800	0	0	1800	1525	1812	8	0			
Grp Volume(v), veh/h	202	580	0	0	476	0	224	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1800	0	0	1800	1525	1820	0	0			
Q Serve(g_s), s	4.0	0.0	0.0	0.0	13.3	0.0	11.3	0.0	0.0			
Cycle Q Clear(g_c), s	4.0	0.0	0.0	0.0	13.3	0.0	11.3	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	618	1331	0	0	1101		282	0				
V/C Ratio(X)	0.33	0.44	0.00	0.00	0.43		0.79	0.00				
Avail Cap(c_a), veh/h	687	1331	0	0	1101		460	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.74	0.74	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	5.7	0.0	0.0	0.0	9.7	0.0	38.7	0.0	0.0			
Incr Delay (d2), s/veh	0.2	0.8	0.0	0.0	1.2	0.0	5.0	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.9	0.3	0.0	0.0	4.8	0.0	5.4	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	5.9	0.8	0.0	0.0	11.0	0.0	43.7	0.0	6.0			
LnGrp LOS	A	A	A	A	B		D	A	A			
Approach Vol, veh/h		782			476	A		270	A			
Approach Delay, s/veh		2.1			11.0			37.3				
Approach LOS		A			B			D				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		75.3		19.7	12.2	63.1			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		60.0		23.0	10.0	44.0			
Max Q Clear Time (g_c+I1), s		2.0		13.3	6.0	15.3			
Green Ext Time (p_c), s		0.3		0.5	0.2	0.2			

Intersection Summary		
HCM 6th Ctrl Delay	11.1	
HCM 6th LOS	B	

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	251	85	177	285	120	97	97	205	236	122	112
Future Volume (veh/h)	100	251	85	177	285	120	97	97	205	236	122	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1949	1949	1711	1711	1711	1837	1837	1837	1794	1866	1794
Adj Flow Rate, veh/h	106	267	64	188	303	66	103	103	131	251	130	70
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	543	1137	268	585	720	775	301	227	359	377	177	95
Arrive On Green	0.07	0.38	0.38	0.11	0.42	0.42	0.08	0.12	0.12	0.11	0.16	0.16
Sat Flow, veh/h	1856	2974	700	1629	1711	1450	1750	1837	1557	1709	1141	614
Grp Volume(v), veh/h	106	164	167	188	303	66	103	103	131	251	0	200
Grp Sat Flow(s),veh/h/ln	1856	1852	1823	1629	1711	1450	1750	1837	1557	1709	0	1756
Q Serve(g_s), s	2.3	4.2	4.3	4.7	8.7	1.6	3.5	3.6	4.9	8.0	0.0	7.6
Cycle Q Clear(g_c), s	2.3	4.2	4.3	4.7	8.7	1.6	3.5	3.6	4.9	8.0	0.0	7.6
Prop In Lane	1.00		0.38	1.00		1.00	1.00		1.00	1.00		0.35
Lane Grp Cap(c), veh/h	543	708	697	585	720	775	301	227	359	377	0	272
V/C Ratio(X)	0.20	0.23	0.24	0.32	0.42	0.09	0.34	0.45	0.36	0.67	0.00	0.73
Avail Cap(c_a), veh/h	627	708	697	596	720	775	357	415	518	377	0	396
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.5	14.7	14.7	10.5	14.3	7.9	23.7	28.5	22.6	24.5	0.0	28.2
Incr Delay (d2), s/veh	0.2	0.8	0.8	0.3	1.8	0.2	0.7	1.4	0.6	4.4	0.0	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.7	1.7	1.4	3.3	0.5	1.4	1.7	1.8	3.9	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.6	15.4	15.5	10.8	16.1	8.1	24.4	29.9	23.2	28.9	0.0	32.1
LnGrp LOS	B	B	B	B	B	A	C	C	C	C	A	C
Approach Vol, veh/h		437			557			337			451	
Approach Delay, s/veh		14.5			13.4			25.6			30.3	
Approach LOS		B			B			C			C	

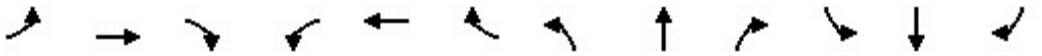
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	32.2	10.4	15.3	9.5	34.8	12.6	13.0
Change Period (Y+Rc), s	5.7	6.4	5.6	* 5.4	5.7	6.4	5.6	* 5.4
Max Green Setting (Gmax), s	7.0	18.1	7.0	* 15	7.0	18.1	7.0	* 15
Max Q Clear Time (g_c+I1), s	6.7	6.3	5.5	9.6	4.3	10.7	10.0	6.9
Green Ext Time (p_c), s	0.0	2.3	0.0	0.3	0.1	1.9	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	20.3
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



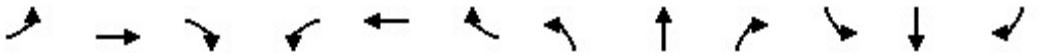
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	556	109	67	592	0	0	0	0	177	2	138
Future Volume (veh/h)	0	556	109	67	592	0	0	0	0	177	2	138
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1800	0				1860	1950	1860
Adj Flow Rate, veh/h	0	611	0	74	651	0				195	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	1	0	0	0	0				1	0	1
Cap, veh/h	0	1375		530	1265	0				271	3	
Arrive On Green	0.00	0.57	0.00	0.04	0.47	0.00				0.15	0.15	0.00
Sat Flow, veh/h	0	3000	1525	1714	1800	0				1839	19	0
Grp Volume(v), veh/h	0	611	0	74	651	0				197	0	0
Grp Sat Flow(s),veh/h/ln	0	1214	1525	1714	1800	0				1858	0	0
Q Serve(g_s), s	0.0	10.2	0.0	1.1	17.7	0.0				7.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	10.2	0.0	1.1	17.7	0.0				7.1	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h	0	1375		530	1265	0				274	0	
V/C Ratio(X)	0.00	0.44		0.14	0.51	0.00				0.72	0.00	
Avail Cap(c_a), veh/h	0	1375		627	1265	0				531	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.78	0.78	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.8	0.0	5.7	10.2	0.0				28.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.0	0.0	0.1	1.2	0.0				3.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.3	0.0	0.3	7.4	0.0				3.3	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	9.8	0.0	5.8	11.4	0.0				32.0	0.0	6.0
LnGrp LOS	A	A		A	B	A				C	A	A
Approach Vol, veh/h		611	A		725						349	A
Approach Delay, s/veh		9.8			10.8						20.7	
Approach LOS		A			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.6	45.1		15.3		54.7
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	25.0		19.0		38.5
Max Q Clear Time (g_c+I1), s	3.1	12.2		9.1		19.7
Green Ext Time (p_c), s	0.0	0.5		0.4		0.4

Intersection Summary		
HCM 6th Ctrl Delay		12.5
HCM 6th LOS		B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



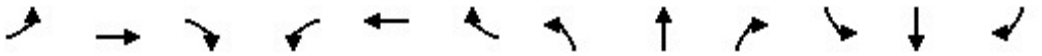
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	545	0	0	447	211	210	1	43	0	0	0
Future Volume (veh/h)	190	545	0	0	447	211	210	1	43	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1800	0	0	1800	1800	1837	1911	1837			
Adj Flow Rate, veh/h	202	580	0	0	476	0	223	1	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	1	0	0	0	0	0	0	0	0			
Cap, veh/h	575	1249	0	0	958		296	1				
Arrive On Green	0.06	0.46	0.00	0.00	0.53	0.00	0.16	0.16	0.00			
Sat Flow, veh/h	1701	1800	0	0	1800	1525	1812	8	0			
Grp Volume(v), veh/h	202	580	0	0	476	0	224	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1800	0	0	1800	1525	1820	0	0			
Q Serve(g_s), s	3.3	15.4	0.0	0.0	11.8	0.0	8.2	0.0	0.0			
Cycle Q Clear(g_c), s	3.3	15.4	0.0	0.0	11.8	0.0	8.2	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	575	1249	0	0	958		297	0				
V/C Ratio(X)	0.35	0.46	0.00	0.00	0.50		0.75	0.00				
Avail Cap(c_a), veh/h	641	1249	0	0	958		442	0				
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.81	0.81	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	6.8	9.9	0.0	0.0	10.4	0.0	27.9	0.0	0.0			
Incr Delay (d2), s/veh	0.3	1.0	0.0	0.0	1.8	0.0	4.0	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.9	6.4	0.0	0.0	4.2	0.0	3.7	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	7.1	10.9	0.0	0.0	12.3	0.0	32.0	0.0	6.0			
LnGrp LOS	A	B	A	A	B		C	A	A			
Approach Vol, veh/h		782			476	A		270	A			
Approach Delay, s/veh		9.9			12.3			27.5				
Approach LOS		A			B			C				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		53.6		16.4	11.3	42.3			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		42.0		16.0	8.0	28.0			
Max Q Clear Time (g_c+I1), s		17.4		10.2	5.3	13.8			
Green Ext Time (p_c), s		0.3		0.4	0.2	0.2			

Intersection Summary		
HCM 6th Ctrl Delay	13.8	
HCM 6th LOS	B	

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	312	48	84	347	124	59	64	123	120	87	36
Future Volume (veh/h)	29	312	48	84	347	124	59	64	123	120	87	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1949	1949	1711	1711	1711	1837	1837	1837	1794	1866	1794
Adj Flow Rate, veh/h	31	332	37	89	369	68	63	68	79	128	93	23
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	659	827	92	540	866	734	312	83	96	288	214	53
Arrive On Green	0.03	0.48	0.48	0.12	1.00	1.00	0.06	0.11	0.11	0.10	0.15	0.15
Sat Flow, veh/h	1856	1723	192	1629	1711	1450	1750	775	900	1709	1445	357
Grp Volume(v), veh/h	31	0	369	89	369	68	63	0	147	128	0	116
Grp Sat Flow(s),veh/h/ln	1856	0	1914	1629	1711	1450	1750	0	1675	1709	0	1802
Q Serve(g_s), s	0.6	0.0	9.3	2.0	0.0	0.0	2.3	0.0	6.4	4.8	0.0	4.4
Cycle Q Clear(g_c), s	0.6	0.0	9.3	2.0	0.0	0.0	2.3	0.0	6.4	4.8	0.0	4.4
Prop In Lane	1.00		0.10	1.00		1.00	1.00		0.54	1.00		0.20
Lane Grp Cap(c), veh/h	659	0	919	540	866	734	312	0	179	288	0	267
V/C Ratio(X)	0.05	0.00	0.40	0.16	0.43	0.09	0.20	0.00	0.82	0.44	0.00	0.43
Avail Cap(c_a), veh/h	796	0	919	618	866	734	401	0	179	304	0	267
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.87	0.87	0.87	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.1	0.0	12.6	8.5	0.0	0.0	27.3	0.0	32.8	25.3	0.0	29.1
Incr Delay (d2), s/veh	0.0	0.0	1.3	0.1	1.3	0.2	0.3	0.0	25.6	1.1	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	3.8	0.6	0.3	0.0	1.0	0.0	3.8	1.9	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.1	0.0	13.9	8.6	1.3	0.2	27.6	0.0	58.4	26.4	0.0	30.2
LnGrp LOS	A	A	B	A	A	A	C	A	E	C	A	C
Approach Vol, veh/h		400			526			210			244	
Approach Delay, s/veh		13.5			2.4			49.1			28.2	
Approach LOS		B			A			D			C	

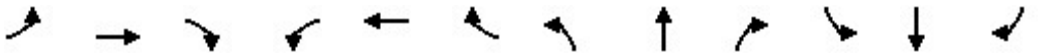
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	41.4	8.4	15.5	7.7	43.4	11.5	12.4
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 7	30.7	* 7	7.0	* 7	30.7	* 7	7.0
Max Q Clear Time (g_c+I1), s	4.0	11.3	4.3	6.4	2.6	2.0	6.8	8.4
Green Ext Time (p_c), s	0.0	3.5	0.0	0.0	0.0	4.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



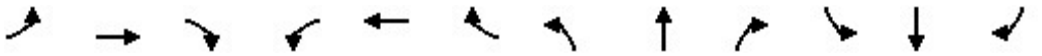
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	478	48	69	505	0	0	0	0	183	2	74
Future Volume (veh/h)	0	478	48	69	505	0	0	0	0	183	2	74
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1800	0				1860	1950	1860
Adj Flow Rate, veh/h	0	525	0	76	555	0				201	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	1	0	0	0	0				1	0	1
Cap, veh/h	0	1041		556	1282	0				272	3	
Arrive On Green	0.00	0.58	0.00	0.11	1.00	0.00				0.15	0.15	0.00
Sat Flow, veh/h	0	1786	1525	1714	1800	0				1839	18	0
Grp Volume(v), veh/h	0	525	0	76	555	0				203	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1800	0				1858	0	0
Q Serve(g_s), s	0.0	13.0	0.0	1.1	0.0	0.0				7.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	13.0	0.0	1.1	0.0	0.0				7.8	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h	0	1041		556	1282	0				275	0	
V/C Ratio(X)	0.00	0.50		0.14	0.43	0.00				0.74	0.00	
Avail Cap(c_a), veh/h	0	1041		644	1282	0				471	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.88	0.00	0.89	0.89	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	9.2	0.0	5.7	0.0	0.0				30.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.5	0.0	0.1	1.0	0.0				3.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.4	0.0	0.3	0.3	0.0				3.7	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	10.8	0.0	5.8	1.0	0.0				34.4	0.0	6.0
LnGrp LOS	A	B		A	A	A				C	A	A
Approach Vol, veh/h		525	A		631						284	A
Approach Delay, s/veh		10.8			1.5						26.3	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.7	49.2		16.1		58.9
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	31.0		18.0		44.5
Max Q Clear Time (g_c+I1), s	3.1	15.0		9.8		2.0
Green Ext Time (p_c), s	0.0	0.3		0.4		0.3

Intersection Summary	
HCM 6th Ctrl Delay	9.8
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



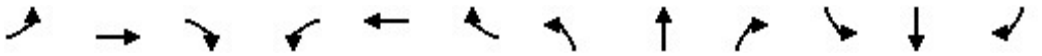
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	533	0	0	429	219	144	1	44	0	0	0
Future Volume (veh/h)	131	533	0	0	429	219	144	1	44	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1772	1800	0	0	1800	1800	1837	1911	1837			
Adj Flow Rate, veh/h	139	567	0	0	456	0	153	1	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	2	0	0	0	0	0	0	0	0			
Cap, veh/h	659	1344	0	0	1107		217	1				
Arrive On Green	0.13	1.00	0.00	0.00	0.61	0.00	0.12	0.12	0.00			
Sat Flow, veh/h	1688	1800	0	0	1800	1525	1809	12	0			
Grp Volume(v), veh/h	139	567	0	0	456	0	154	0	0			
Grp Sat Flow(s),veh/h/ln	1688	1800	0	0	1800	1525	1820	0	0			
Q Serve(g_s), s	2.0	0.0	0.0	0.0	9.8	0.0	6.1	0.0	0.0			
Cycle Q Clear(g_c), s	2.0	0.0	0.0	0.0	9.8	0.0	6.1	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		0.00			
Lane Grp Cap(c), veh/h	659	1344	0	0	1107		218	0				
V/C Ratio(X)	0.21	0.42	0.00	0.00	0.41		0.70	0.00				
Avail Cap(c_a), veh/h	729	1344	0	0	1107		388	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.78	0.78	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	4.3	0.0	0.0	0.0	7.5	0.0	31.7	0.0	0.0			
Incr Delay (d2), s/veh	0.1	0.8	0.0	0.0	1.1	0.0	4.1	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.4	0.3	0.0	0.0	3.2	0.0	2.8	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	4.4	0.8	0.0	0.0	8.6	0.0	35.8	0.0	6.0			
LnGrp LOS	A	A	A	A	A		D	A	A			
Approach Vol, veh/h		706			456	A		201	A			
Approach Delay, s/veh		1.5			8.6			28.9				
Approach LOS		A			A			C				

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		61.0		14.0	9.9	51.1						
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0						
Max Green Setting (Gmax), s		48.0		15.0	7.0	35.0						
Max Q Clear Time (g_c+I1), s		2.0		8.1	4.0	11.8						
Green Ext Time (p_c), s		0.3		0.2	0.1	0.2						

Intersection Summary												
HCM 6th Ctrl Delay			7.9									
HCM 6th LOS			A									

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	312	48	84	347	124	59	64	123	120	87	36
Future Volume (veh/h)	29	312	48	84	347	124	59	64	123	120	87	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1949	1949	1711	1711	1711	1837	1837	1837	1794	1866	1794
Adj Flow Rate, veh/h	31	332	37	89	369	68	63	68	79	128	93	23
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	657	932	882	555	863	873	313	83	96	289	214	53
Arrive On Green	0.03	0.48	0.48	0.12	1.00	1.00	0.06	0.11	0.11	0.10	0.15	0.15
Sat Flow, veh/h	1856	1949	1652	1629	1711	1450	1750	775	900	1709	1445	357
Grp Volume(v), veh/h	31	332	37	89	369	68	63	0	147	128	0	116
Grp Sat Flow(s),veh/h/ln	1856	1949	1652	1629	1711	1450	1750	0	1675	1709	0	1802
Q Serve(g_s), s	0.6	8.0	0.8	2.0	0.0	0.0	2.3	0.0	6.4	4.8	0.0	4.4
Cycle Q Clear(g_c), s	0.6	8.0	0.8	2.0	0.0	0.0	2.3	0.0	6.4	4.8	0.0	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.54	1.00		0.20
Lane Grp Cap(c), veh/h	657	932	882	555	863	873	313	0	179	289	0	267
V/C Ratio(X)	0.05	0.36	0.04	0.16	0.43	0.08	0.20	0.00	0.82	0.44	0.00	0.43
Avail Cap(c_a), veh/h	795	932	882	633	863	873	402	0	179	304	0	267
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.87	0.87	0.87	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.1	12.3	8.3	8.4	0.0	0.0	27.3	0.0	32.8	25.6	0.0	29.1
Incr Delay (d2), s/veh	0.0	1.1	0.1	0.1	1.3	0.2	0.3	0.0	25.6	1.1	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.3	0.3	0.6	0.3	0.0	1.0	0.0	3.8	1.9	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.2	13.4	8.4	8.5	1.3	0.2	27.6	0.0	58.4	26.7	0.0	30.2
LnGrp LOS	A	B	A	A	A	A	C	A	E	C	A	C
Approach Vol, veh/h		400			526			210			244	
Approach Delay, s/veh		12.6			2.4			49.1			28.4	
Approach LOS		B			A			D			C	

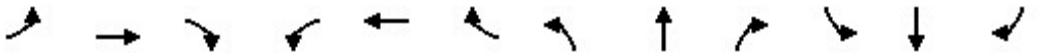
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	41.3	8.9	15.6	7.2	43.2	12.0	12.5
Change Period (Y+Rc), s	* 5.8	6.4	* 5.7	5.5	* 5.8	6.4	* 5.7	5.5
Max Green Setting (Gmax), s	* 7	30.6	* 7	7.0	* 7	30.6	* 7	7.0
Max Q Clear Time (g_c+I1), s	4.0	10.0	4.3	6.4	2.6	2.0	6.8	8.4
Green Ext Time (p_c), s	0.0	3.5	0.0	0.0	0.0	4.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.1
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



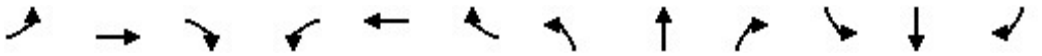
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	478	48	69	505	0	0	0	0	183	2	74
Future Volume (veh/h)	0	478	48	69	505	0	0	0	0	183	2	74
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1800	0				1860	1950	1860
Adj Flow Rate, veh/h	0	525	0	76	555	0				201	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	1	0	0	0	0				1	0	1
Cap, veh/h	0	1041		556	1282	0				272	3	
Arrive On Green	0.00	0.58	0.00	0.11	1.00	0.00				0.15	0.15	0.00
Sat Flow, veh/h	0	1786	1525	1714	1800	0				1839	18	0
Grp Volume(v), veh/h	0	525	0	76	555	0				203	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1800	0				1858	0	0
Q Serve(g_s), s	0.0	13.0	0.0	1.1	0.0	0.0				7.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	13.0	0.0	1.1	0.0	0.0				7.8	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h	0	1041		556	1282	0				275	0	
V/C Ratio(X)	0.00	0.50		0.14	0.43	0.00				0.74	0.00	
Avail Cap(c_a), veh/h	0	1041		644	1282	0				471	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.90	0.00	0.89	0.89	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	9.2	0.0	5.7	0.0	0.0				30.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.6	0.0	0.1	1.0	0.0				3.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.4	0.0	0.3	0.3	0.0				3.7	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	10.8	0.0	5.8	1.0	0.0				34.4	0.0	6.0
LnGrp LOS	A	B		A	A	A				C	A	A
Approach Vol, veh/h		525	A		631						284	A
Approach Delay, s/veh		10.8			1.5						26.3	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.7	49.2		16.1		58.9
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	31.0		18.0		44.5
Max Q Clear Time (g_c+I1), s	3.1	15.0		9.8		2.0
Green Ext Time (p_c), s	0.0	0.3		0.4		0.3

Intersection Summary	
HCM 6th Ctrl Delay	9.8
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	533	0	0	429	219	144	1	44	0	0	0
Future Volume (veh/h)	131	533	0	0	429	219	144	1	44	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1772	1800	0	0	1800	1800	1837	1911	1837			
Adj Flow Rate, veh/h	139	567	0	0	456	0	153	1	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	2	0	0	0	0	0	0	0	0			
Cap, veh/h	659	1344	0	0	1107		217	1				
Arrive On Green	0.13	1.00	0.00	0.00	0.61	0.00	0.12	0.12	0.00			
Sat Flow, veh/h	1688	1800	0	0	1800	1525	1809	12	0			
Grp Volume(v), veh/h	139	567	0	0	456	0	154	0	0			
Grp Sat Flow(s),veh/h/ln	1688	1800	0	0	1800	1525	1820	0	0			
Q Serve(g_s), s	2.0	0.0	0.0	0.0	9.8	0.0	6.1	0.0	0.0			
Cycle Q Clear(g_c), s	2.0	0.0	0.0	0.0	9.8	0.0	6.1	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		0.00			
Lane Grp Cap(c), veh/h	659	1344	0	0	1107		218	0				
V/C Ratio(X)	0.21	0.42	0.00	0.00	0.41		0.70	0.00				
Avail Cap(c_a), veh/h	729	1344	0	0	1107		388	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.78	0.78	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	4.3	0.0	0.0	0.0	7.5	0.0	31.7	0.0	0.0			
Incr Delay (d2), s/veh	0.1	0.8	0.0	0.0	1.1	0.0	4.1	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.4	0.3	0.0	0.0	3.2	0.0	2.8	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	4.4	0.8	0.0	0.0	8.6	0.0	35.8	0.0	6.0			
LnGrp LOS	A	A	A	A	A		D	A	A			
Approach Vol, veh/h		706			456	A		201	A			
Approach Delay, s/veh		1.5			8.6			28.9				
Approach LOS		A			A			C				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		61.0		14.0	9.9	51.1			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		48.0		15.0	7.0	35.0			
Max Q Clear Time (g_c+I1), s		2.0		8.1	4.0	11.8			
Green Ext Time (p_c), s		0.3		0.2	0.1	0.2			

Intersection Summary		
HCM 6th Ctrl Delay	7.9	
HCM 6th LOS	A	

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	263	86	180	297	124	99	99	209	240	125	113
Future Volume (veh/h)	101	263	86	180	297	124	99	99	209	240	125	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1949	1949	1711	1711	1711	1837	1837	1837	1794	1866	1794
Adj Flow Rate, veh/h	107	280	65	191	316	68	105	105	133	255	133	70
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	483	585	136	456	697	591	374	127	161	361	274	144
Arrive On Green	0.06	0.38	0.38	0.09	0.41	0.41	0.08	0.17	0.17	0.14	0.24	0.24
Sat Flow, veh/h	1856	1530	355	1629	1711	1450	1750	736	933	1709	1151	606
Grp Volume(v), veh/h	107	0	345	191	316	68	105	0	238	255	0	203
Grp Sat Flow(s),veh/h/ln	1856	0	1885	1629	1711	1450	1750	0	1669	1709	0	1757
Q Serve(g_s), s	3.0	0.0	12.5	6.3	12.1	2.6	4.3	0.0	12.4	10.5	0.0	9.0
Cycle Q Clear(g_c), s	3.0	0.0	12.5	6.3	12.1	2.6	4.3	0.0	12.4	10.5	0.0	9.0
Prop In Lane	1.00		0.19	1.00		1.00	1.00		0.56	1.00		0.34
Lane Grp Cap(c), veh/h	483	0	721	456	697	591	374	0	287	361	0	418
V/C Ratio(X)	0.22	0.00	0.48	0.42	0.45	0.12	0.28	0.00	0.83	0.71	0.00	0.49
Avail Cap(c_a), veh/h	529	0	721	456	697	591	396	0	308	361	0	418
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.3	0.0	21.0	15.3	19.4	16.6	27.1	0.0	36.0	24.7	0.0	29.5
Incr Delay (d2), s/veh	0.2	0.0	2.3	0.6	2.1	0.4	0.4	0.0	16.1	6.2	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	5.6	2.2	4.9	0.9	1.8	0.0	6.3	4.7	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.5	0.0	23.3	15.9	21.5	17.0	27.5	0.0	52.1	30.9	0.0	30.4
LnGrp LOS	B	A	C	B	C	B	C	A	D	C	A	C
Approach Vol, veh/h		452			575			343			458	
Approach Delay, s/veh		21.4			19.1			44.5			30.7	
Approach LOS		C			B			D			C	

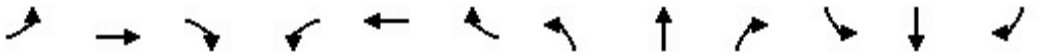
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	39.8	11.1	25.8	11.0	42.1	17.0	19.9
Change Period (Y+Rc), s	* 6.3	6.4	* 5.2	5.4	* 6.3	6.4	* 5.2	5.4
Max Green Setting (Gmax), s	* 7	32.3	* 7	20.4	* 7	32.3	* 12	15.6
Max Q Clear Time (g_c+I1), s	8.3	14.5	6.3	11.0	5.0	14.1	12.5	14.4
Green Ext Time (p_c), s	0.0	3.2	0.0	0.4	0.0	3.5	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	27.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



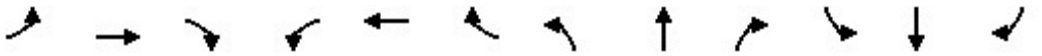
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	573	110	69	610	0	0	0	0	183	2	141
Future Volume (veh/h)	0	573	110	69	610	0	0	0	0	183	2	141
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1800	0				1860	1950	1860
Adj Flow Rate, veh/h	0	630	0	76	670	0				201	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	1	0	0	0	0				1	0	1
Cap, veh/h	0	1125		492	1332	0				263	3	
Arrive On Green	0.00	0.63	0.00	0.10	1.00	0.00				0.14	0.14	0.00
Sat Flow, veh/h	0	1786	1525	1714	1800	0				1839	18	0
Grp Volume(v), veh/h	0	630	0	76	670	0				203	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1800	0				1858	0	0
Q Serve(g_s), s	0.0	18.1	0.0	1.2	0.0	0.0				9.5	0.0	0.0
Cycle Q Clear(g_c), s	0.0	18.1	0.0	1.2	0.0	0.0				9.5	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h	0	1125		492	1332	0				266	0	
V/C Ratio(X)	0.00	0.56		0.15	0.50	0.00				0.76	0.00	
Avail Cap(c_a), veh/h	0	1125		561	1332	0				495	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.83	0.83	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	9.5	0.0	6.3	0.0	0.0				37.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.0	0.0	0.1	1.1	0.0				4.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.4	0.0	0.3	0.4	0.0				4.6	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	11.5	0.0	6.5	1.1	0.0				41.6	0.0	6.0
LnGrp LOS	A	B		A	A	A				D	A	A
Approach Vol, veh/h		630	A		746						358	A
Approach Delay, s/veh		11.5			1.7						26.2	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.9	62.2		17.9		72.1
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	41.0		23.0		54.5
Max Q Clear Time (g_c+I1), s	3.2	20.1		11.5		2.0
Green Ext Time (p_c), s	0.0	0.4		0.5		0.4

Intersection Summary	
HCM 6th Ctrl Delay	10.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



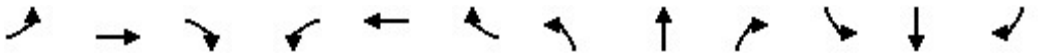
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	564	0	0	463	219	215	1	44	0	0	0
Future Volume (veh/h)	195	564	0	0	463	219	215	1	44	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1800	0	0	1800	1800	1837	1911	1837			
Adj Flow Rate, veh/h	207	600	0	0	493	0	229	1	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	1	0	0	0	0	0	0	0	0			
Cap, veh/h	596	1312	0	0	1069		290	1				
Arrive On Green	0.16	1.00	0.00	0.00	0.59	0.00	0.16	0.16	0.00			
Sat Flow, veh/h	1701	1800	0	0	1800	1525	1812	8	0			
Grp Volume(v), veh/h	207	600	0	0	493	0	230	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1800	0	0	1800	1525	1820	0	0			
Q Serve(g_s), s	4.0	0.0	0.0	0.0	13.8	0.0	10.9	0.0	0.0			
Cycle Q Clear(g_c), s	4.0	0.0	0.0	0.0	13.8	0.0	10.9	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	596	1312	0	0	1069		291	0				
V/C Ratio(X)	0.35	0.46	0.00	0.00	0.46		0.79	0.00				
Avail Cap(c_a), veh/h	649	1312	0	0	1069		465	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.69	0.69	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	6.0	0.0	0.0	0.0	10.2	0.0	36.4	0.0	0.0			
Incr Delay (d2), s/veh	0.2	0.8	0.0	0.0	1.4	0.0	4.8	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.9	0.3	0.0	0.0	5.1	0.0	5.2	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	6.2	0.8	0.0	0.0	11.7	0.0	41.1	0.0	6.0			
LnGrp LOS	A	A	A	A	B		D	A	A			
Approach Vol, veh/h		807			493	A		277	A			
Approach Delay, s/veh		2.2			11.7			35.2				
Approach LOS		A			B			D				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		70.6		19.4	12.2	58.4			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		56.0		22.0	9.0	41.0			
Max Q Clear Time (g_c+I1), s		2.0		12.9	6.0	15.8			
Green Ext Time (p_c), s		0.3		0.5	0.2	0.2			

Intersection Summary		
HCM 6th Ctrl Delay	10.9	
HCM 6th LOS	B	

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	263	86	180	297	124	99	99	209	240	125	113
Future Volume (veh/h)	101	263	86	180	297	124	99	99	209	240	125	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1949	1949	1711	1711	1711	1837	1837	1837	1794	1866	1794
Adj Flow Rate, veh/h	107	280	65	191	316	68	105	105	133	255	133	70
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	486	751	762	492	702	793	369	128	162	353	269	142
Arrive On Green	0.06	0.39	0.39	0.09	0.41	0.41	0.08	0.17	0.17	0.14	0.23	0.23
Sat Flow, veh/h	1856	1949	1652	1629	1711	1450	1750	736	933	1709	1151	606
Grp Volume(v), veh/h	107	280	65	191	316	68	105	0	238	255	0	203
Grp Sat Flow(s),veh/h/ln	1856	1949	1652	1629	1711	1450	1750	0	1669	1709	0	1757
Q Serve(g_s), s	3.0	9.3	2.0	6.3	12.0	2.0	4.3	0.0	12.4	10.5	0.0	9.0
Cycle Q Clear(g_c), s	3.0	9.3	2.0	6.3	12.0	2.0	4.3	0.0	12.4	10.5	0.0	9.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.56	1.00		0.34
Lane Grp Cap(c), veh/h	486	751	762	492	702	793	369	0	290	353	0	411
V/C Ratio(X)	0.22	0.37	0.09	0.39	0.45	0.09	0.28	0.00	0.82	0.72	0.00	0.49
Avail Cap(c_a), veh/h	533	751	762	492	702	793	391	0	347	353	0	449
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.1	19.9	13.6	14.7	19.2	9.7	27.0	0.0	35.8	25.0	0.0	29.8
Incr Delay (d2), s/veh	0.2	1.4	0.2	0.5	2.1	0.2	0.4	0.0	12.5	7.1	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	4.2	0.8	2.2	4.8	0.7	1.8	0.0	6.0	4.7	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.3	21.3	13.8	15.2	21.3	9.9	27.4	0.0	48.3	32.1	0.0	30.8
LnGrp LOS	B	C	B	B	C	A	C	A	D	C	A	C
Approach Vol, veh/h		452			575			343			458	
Approach Delay, s/veh		18.8			17.9			41.9			31.5	
Approach LOS		B			B			D			C	

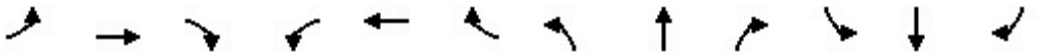
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	40.1	11.6	25.6	10.5	42.3	17.0	20.1
Change Period (Y+Rc), s	* 5.8	6.4	* 5.7	5.5	* 5.8	6.4	* 5.7	5.5
Max Green Setting (Gmax), s	* 7	30.6	* 7	22.0	* 7	30.6	* 11	17.7
Max Q Clear Time (g_c+I1), s	8.3	11.3	6.3	11.0	5.0	14.0	12.5	14.4
Green Ext Time (p_c), s	0.0	3.1	0.0	0.4	0.0	3.3	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	26.0
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



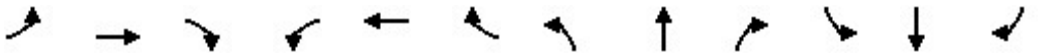
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	573	110	69	610	0	0	0	0	183	2	141
Future Volume (veh/h)	0	573	110	69	610	0	0	0	0	183	2	141
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1800	0				1860	1950	1860
Adj Flow Rate, veh/h	0	630	0	76	670	0				201	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	1	0	0	0	0				1	0	1
Cap, veh/h	0	1125		492	1332	0				263	3	
Arrive On Green	0.00	0.63	0.00	0.10	1.00	0.00				0.14	0.14	0.00
Sat Flow, veh/h	0	1786	1525	1714	1800	0				1839	18	0
Grp Volume(v), veh/h	0	630	0	76	670	0				203	0	0
Grp Sat Flow(s),veh/h/ln	0	1786	1525	1714	1800	0				1858	0	0
Q Serve(g_s), s	0.0	18.1	0.0	1.2	0.0	0.0				9.5	0.0	0.0
Cycle Q Clear(g_c), s	0.0	18.1	0.0	1.2	0.0	0.0				9.5	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h	0	1125		492	1332	0				266	0	
V/C Ratio(X)	0.00	0.56		0.15	0.50	0.00				0.76	0.00	
Avail Cap(c_a), veh/h	0	1125		561	1332	0				495	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.83	0.83	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	9.5	0.0	6.3	0.0	0.0				37.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.0	0.0	0.1	1.1	0.0				4.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.4	0.0	0.3	0.4	0.0				4.6	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	11.5	0.0	6.5	1.1	0.0				41.6	0.0	6.0
LnGrp LOS	A	B		A	A	A				D	A	A
Approach Vol, veh/h		630	A		746						358	A
Approach Delay, s/veh		11.5			1.7						26.2	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.9	62.2		17.9		72.1
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	41.0		23.0		54.5
Max Q Clear Time (g_c+I1), s	3.2	20.1		11.5		2.0
Green Ext Time (p_c), s	0.0	0.4		0.5		0.4

Intersection Summary	
HCM 6th Ctrl Delay	10.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



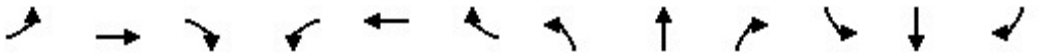
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	564	0	0	463	219	215	1	44	0	0	0
Future Volume (veh/h)	195	564	0	0	463	219	215	1	44	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1800	0	0	1800	1800	1837	1911	1837			
Adj Flow Rate, veh/h	207	600	0	0	493	0	229	1	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	1	0	0	0	0	0	0	0	0			
Cap, veh/h	596	1312	0	0	1069		290	1				
Arrive On Green	0.16	1.00	0.00	0.00	0.59	0.00	0.16	0.16	0.00			
Sat Flow, veh/h	1701	1800	0	0	1800	1525	1812	8	0			
Grp Volume(v), veh/h	207	600	0	0	493	0	230	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1800	0	0	1800	1525	1820	0	0			
Q Serve(g_s), s	4.0	0.0	0.0	0.0	13.8	0.0	10.9	0.0	0.0			
Cycle Q Clear(g_c), s	4.0	0.0	0.0	0.0	13.8	0.0	10.9	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	596	1312	0	0	1069		291	0				
V/C Ratio(X)	0.35	0.46	0.00	0.00	0.46		0.79	0.00				
Avail Cap(c_a), veh/h	649	1312	0	0	1069		465	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.69	0.69	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	6.0	0.0	0.0	0.0	10.2	0.0	36.4	0.0	0.0			
Incr Delay (d2), s/veh	0.2	0.8	0.0	0.0	1.4	0.0	4.8	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.9	0.3	0.0	0.0	5.1	0.0	5.2	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	6.2	0.8	0.0	0.0	11.7	0.0	41.1	0.0	6.0			
LnGrp LOS	A	A	A	A	B		D	A	A			
Approach Vol, veh/h		807			493	A		277	A			
Approach Delay, s/veh		2.2			11.7			35.2				
Approach LOS		A			B			D				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		70.6		19.4	12.2	58.4			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		56.0		22.0	9.0	41.0			
Max Q Clear Time (g_c+I1), s		2.0		12.9	6.0	15.8			
Green Ext Time (p_c), s		0.3		0.5	0.2	0.2			

Intersection Summary		
HCM 6th Ctrl Delay		10.9
HCM 6th LOS		B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	263	86	180	297	124	99	99	209	240	125	113
Future Volume (veh/h)	101	263	86	180	297	124	99	99	209	240	125	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1949	1949	1711	1711	1711	1837	1837	1837	1794	1866	1794
Adj Flow Rate, veh/h	107	280	65	191	316	68	105	105	133	255	133	70
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	529	1132	258	576	714	771	303	232	366	378	181	95
Arrive On Green	0.07	0.38	0.38	0.11	0.42	0.42	0.08	0.13	0.13	0.11	0.16	0.16
Sat Flow, veh/h	1856	2994	684	1629	1711	1450	1750	1837	1557	1709	1151	606
Grp Volume(v), veh/h	107	171	174	191	316	68	105	105	133	255	0	203
Grp Sat Flow(s),veh/h/ln	1856	1852	1826	1629	1711	1450	1750	1837	1557	1709	0	1757
Q Serve(g_s), s	2.4	4.4	4.6	4.8	9.2	1.6	3.5	3.7	5.0	8.0	0.0	7.7
Cycle Q Clear(g_c), s	2.4	4.4	4.6	4.8	9.2	1.6	3.5	3.7	5.0	8.0	0.0	7.7
Prop In Lane	1.00		0.37	1.00		1.00	1.00		1.00	1.00		0.34
Lane Grp Cap(c), veh/h	529	700	690	576	714	771	303	232	366	378	0	276
V/C Ratio(X)	0.20	0.24	0.25	0.33	0.44	0.09	0.35	0.45	0.36	0.67	0.00	0.74
Avail Cap(c_a), veh/h	612	700	690	585	714	771	357	417	523	378	0	399
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.7	14.9	15.0	10.6	14.6	8.1	23.5	28.4	22.4	24.4	0.0	28.1
Incr Delay (d2), s/veh	0.2	0.8	0.9	0.3	2.0	0.2	0.7	1.4	0.6	4.7	0.0	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	1.8	1.8	1.5	3.5	0.5	1.5	1.7	1.8	4.0	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.9	15.7	15.8	10.9	16.6	8.3	24.2	29.7	23.0	29.1	0.0	32.2
LnGrp LOS	B	B	B	B	B	A	C	C	C	C	A	C
Approach Vol, veh/h		452			575			343			458	
Approach Delay, s/veh		14.9			13.7			25.4			30.5	
Approach LOS		B			B			C			C	

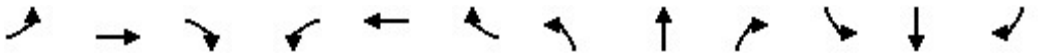
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	31.9	10.4	15.4	9.6	34.6	12.6	13.2
Change Period (Y+Rc), s	5.7	6.4	5.6	* 5.4	5.7	6.4	5.6	* 5.4
Max Green Setting (Gmax), s	7.0	18.0	7.0	* 15	7.0	18.0	7.0	* 15
Max Q Clear Time (g_c+I1), s	6.8	6.6	5.5	9.7	4.4	11.2	10.0	7.0
Green Ext Time (p_c), s	0.0	2.3	0.0	0.3	0.1	1.9	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	20.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



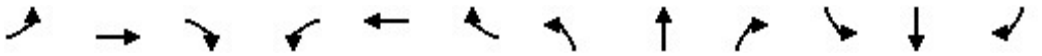
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	573	110	69	610	0	0	0	0	183	2	141
Future Volume (veh/h)	0	573	110	69	610	0	0	0	0	183	2	141
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1786	1800	1800	1800	0				1860	1950	1860
Adj Flow Rate, veh/h	0	630	0	76	670	0				201	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	1	0	0	0	0				1	0	1
Cap, veh/h	0	1366		517	1259	0				277	3	
Arrive On Green	0.00	0.56	0.00	0.04	0.47	0.00				0.15	0.15	0.00
Sat Flow, veh/h	0	3000	1525	1714	1800	0				1839	18	0
Grp Volume(v), veh/h	0	630	0	76	670	0				203	0	0
Grp Sat Flow(s),veh/h/ln	0	1214	1525	1714	1800	0				1858	0	0
Q Serve(g_s), s	0.0	10.7	0.0	1.1	18.4	0.0				7.3	0.0	0.0
Cycle Q Clear(g_c), s	0.0	10.7	0.0	1.1	18.4	0.0				7.3	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h	0	1366		517	1259	0				280	0	
V/C Ratio(X)	0.00	0.46		0.15	0.53	0.00				0.73	0.00	
Avail Cap(c_a), veh/h	0	1366		612	1259	0				504	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.77	0.77	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	9.0	0.0	5.9	10.5	0.0				28.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.1	0.0	0.1	1.2	0.0				3.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.4	0.0	0.3	7.7	0.0				3.4	0.0	0.0
Unsig. Movement Delay, s/veh												6.00
LnGrp Delay(d),s/veh	0.0	10.2	0.0	6.0	11.7	0.0				31.9	0.0	6.0
LnGrp LOS	A	B		A	B	A				C	A	A
Approach Vol, veh/h		630	A		746						358	A
Approach Delay, s/veh		10.2			11.1						20.7	
Approach LOS		B			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.6	44.9		15.5		54.5
Change Period (Y+Rc), s	6.5	6.5		6.0		6.5
Max Green Setting (Gmax), s	7.0	26.0		18.0		39.5
Max Q Clear Time (g_c+I1), s	3.1	12.7		9.3		20.4
Green Ext Time (p_c), s	0.0	0.5		0.4		0.4

Intersection Summary	
HCM 6th Ctrl Delay	12.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	564	0	0	463	219	215	1	44	0	0	0
Future Volume (veh/h)	195	564	0	0	463	219	215	1	44	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1786	1800	0	0	1800	1800	1837	1911	1837			
Adj Flow Rate, veh/h	207	600	0	0	493	0	229	1	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	1	0	0	0	0	0	0	0	0			
Cap, veh/h	560	1243	0	0	950		302	1				
Arrive On Green	0.06	0.46	0.00	0.00	0.53	0.00	0.17	0.17	0.00			
Sat Flow, veh/h	1701	1800	0	0	1800	1525	1812	8	0			
Grp Volume(v), veh/h	207	600	0	0	493	0	230	0	0			
Grp Sat Flow(s),veh/h/ln	1701	1800	0	0	1800	1525	1820	0	0			
Q Serve(g_s), s	3.4	16.1	0.0	0.0	12.5	0.0	8.4	0.0	0.0			
Cycle Q Clear(g_c), s	3.4	16.1	0.0	0.0	12.5	0.0	8.4	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	560	1243	0	0	950		303	0				
V/C Ratio(X)	0.37	0.48	0.00	0.00	0.52		0.76	0.00				
Avail Cap(c_a), veh/h	599	1243	0	0	950		442	0				
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.80	0.80	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	7.2	10.2	0.0	0.0	10.7	0.0	27.8	0.0	0.0			
Incr Delay (d2), s/veh	0.3	1.1	0.0	0.0	2.0	0.0	4.4	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.9	6.7	0.0	0.0	4.5	0.0	3.9	0.0	0.0			
Unsig. Movement Delay, s/veh									6.00			
LnGrp Delay(d),s/veh	7.5	11.2	0.0	0.0	12.8	0.0	32.2	0.0	6.0			
LnGrp LOS	A	B	A	A	B		C	A	A			
Approach Vol, veh/h		807			493	A		277	A			
Approach Delay, s/veh		10.3			12.8			27.8				
Approach LOS		B			B			C				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		53.3		16.7	11.4	41.9			
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0			
Max Green Setting (Gmax), s		42.0		16.0	7.0	29.0			
Max Q Clear Time (g_c+I1), s		18.1		10.4	5.4	14.5			
Green Ext Time (p_c), s		0.3		0.4	0.1	0.2			

Intersection Summary		
HCM 6th Ctrl Delay	14.1	
HCM 6th LOS	B	

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Turn Lane Warrant Worksheets

Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Upper Allen Township	**Analysis Date:**	1/24/2022
County:	Cumberland County	**Conducted By:**	MEA
PennDOT Engineering District:	8	**Checked By:**	
		Agency/Company Name:	ALPHA CEI

Intersection & Approach Description: Gettysburg Pike / Proposed Site Driveway 1 Southbound Advancing

Analysis Period:	2027 Build	**Number of Approach Lanes:**	1
Design Hour:	AM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	21	2.0%	22
	Through	-	121	3.0%	123
	Right	Yes	0	0.0%	0
Opposing	Left	Yes	0	0.0%	0
	Through	-	176	2.0%	178
	Right	Yes	120	2.0%	122

Advancing Volume:	145
Opposing Volume:	300
Left Turn Volume:	22
% Left Turns in Advancing Volume:	15.17%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	21	2.0%	N/A
	Through	-	121	3.0%	N/A
	Right	-	0	0.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 1

Warrant Met?: No

Right Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	22
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	0

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Left Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Left Turn Lane Storage Length:	N/A	Feet

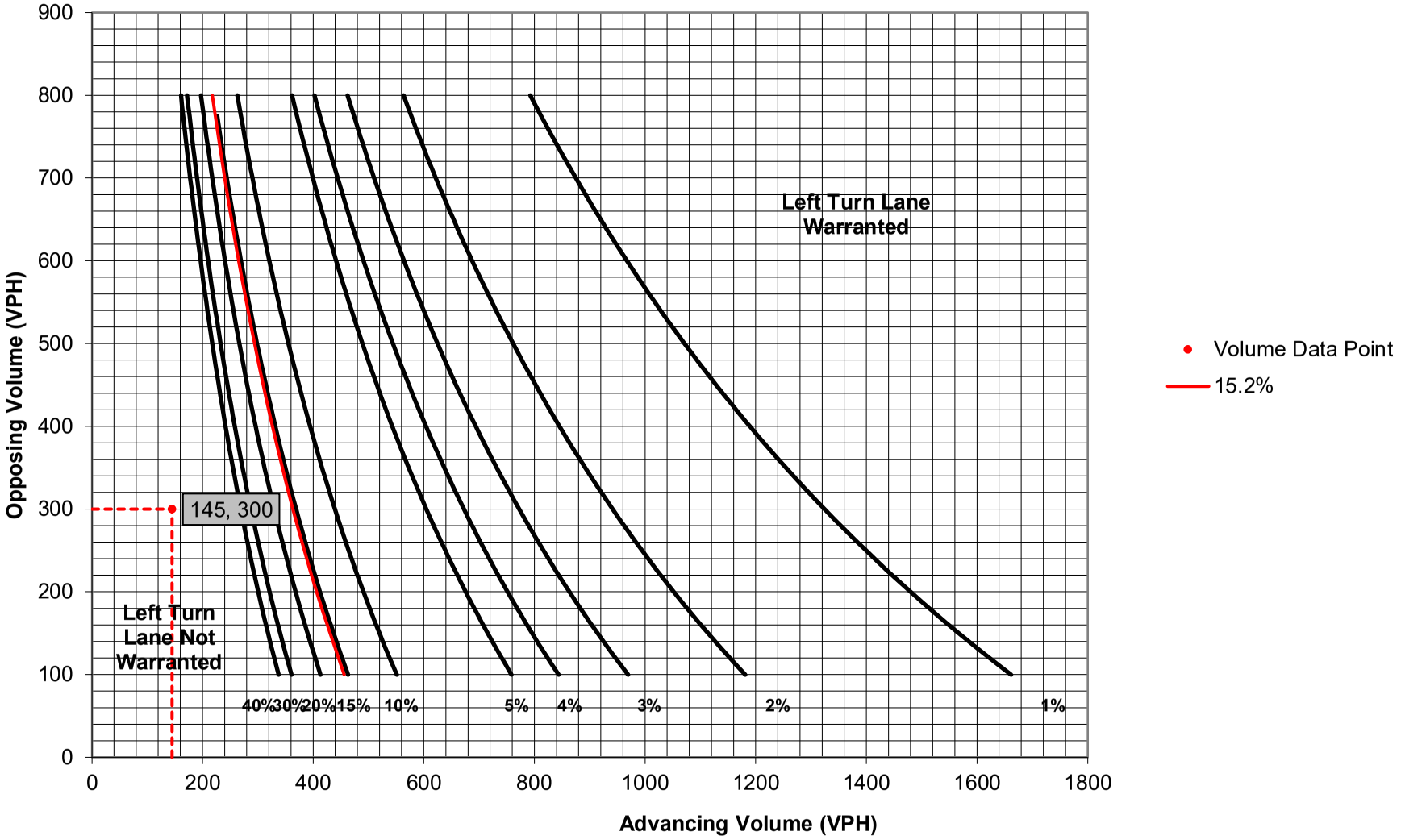
Additional Findings:

N/A

Additional Comments / Justifications:

Figure 1. Warrant for left turn lanes on two-lane roadways (speeds to 35 mph, unsignalized and signalized intersections)

(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Upper Allen Township	**Analysis Date:**	1/24/2022
County:	Cumberland County	**Conducted By:**	MEA
PennDOT Engineering District:	8	**Checked By:**	
		Agency/Company Name:	ALPHA CEI

Intersection & Approach Description: Gettysburg Pike / Proposed Site Driveway 1 Northbound Advancing

Analysis Period:	2027 Build	**Number of Approach Lanes:**	1
Design Hour:	AM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	25		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	N/A
	Through	-	176	2.0%	N/A
	Right	Yes	120	2.0%	N/A
Opposing	Left	Yes	21	2.0%	N/A
	Through	-	121	3.0%	N/A
	Right	Yes	0	0.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	0
	Through	-	176	2.0%	178
	Right	-	120	2.0%	122

Advancing Volume:	300
Right Turn Volume:	122

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 9

Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	122
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	0

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

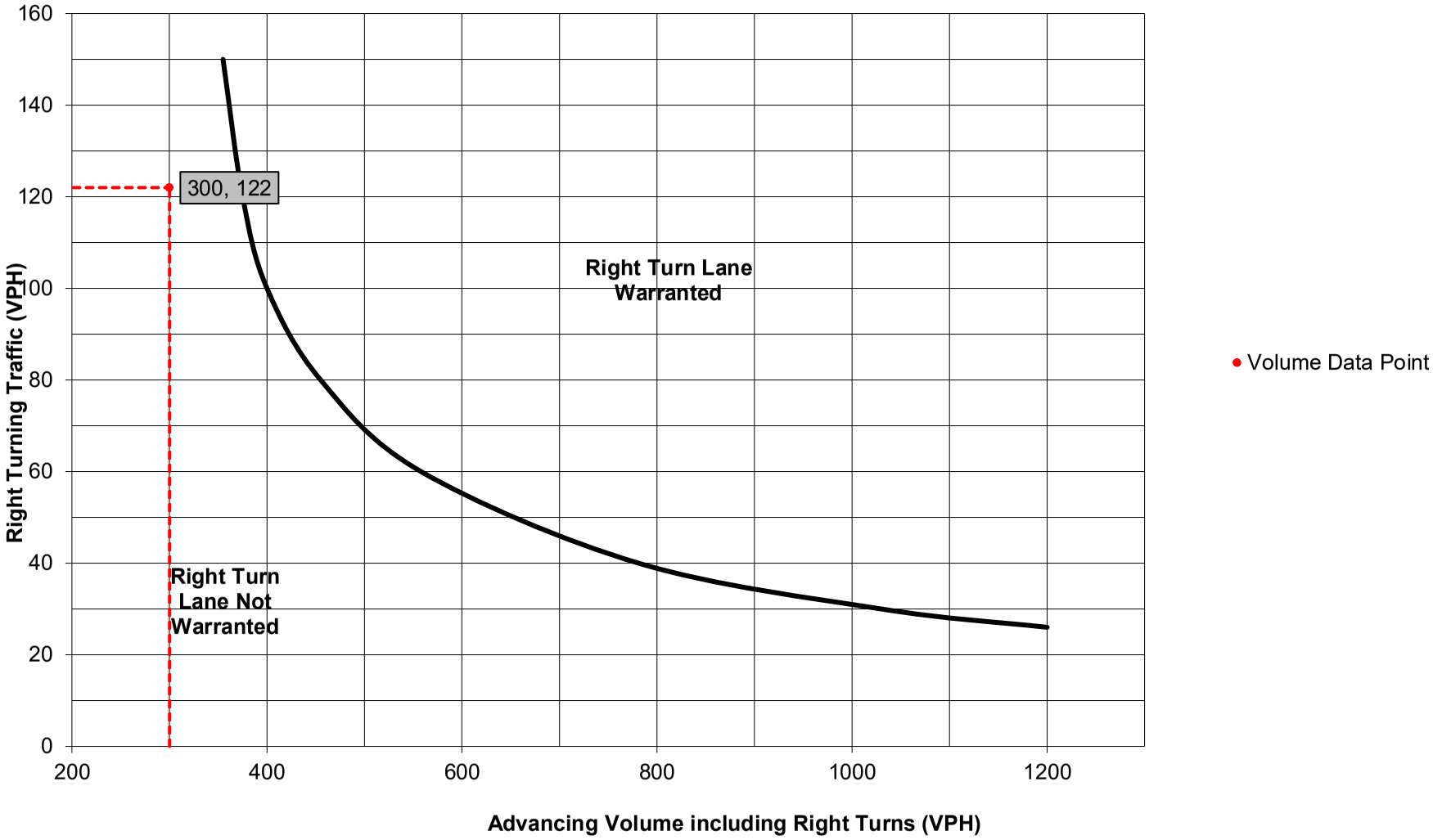
Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings:

N/A

Additional Comments / Justifications:

Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Upper Allen Township	**Analysis Date:**	1/24/2022
County:	Cumberland County	**Conducted By:**	MEA
PennDOT Engineering District:	8	**Checked By:**	
		Agency/Company Name:	ALPHA CEI

Intersection & Approach Description: South Market Street / Proposed Site Driveway 2 Westbound Advancing

Analysis Period:	2027 Build	**Number of Approach Lanes:**	1
Design Hour:	AM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	40		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	N/A
	Through	-	758	0.0%	N/A
	Right	Yes	144	2.0%	N/A
Opposing	Left	Yes	0	0.0%	N/A
	Through	-	0	0.0%	N/A
	Right	Yes	0	0.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	0
	Through	-	758	0.0%	758
	Right	-	144	2.0%	146

Advancing Volume:	904
Right Turn Volume:	146

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 9

Warrant Met?: Yes

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	146
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	0

Average # of Vehicles/Cycle: 2.0

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

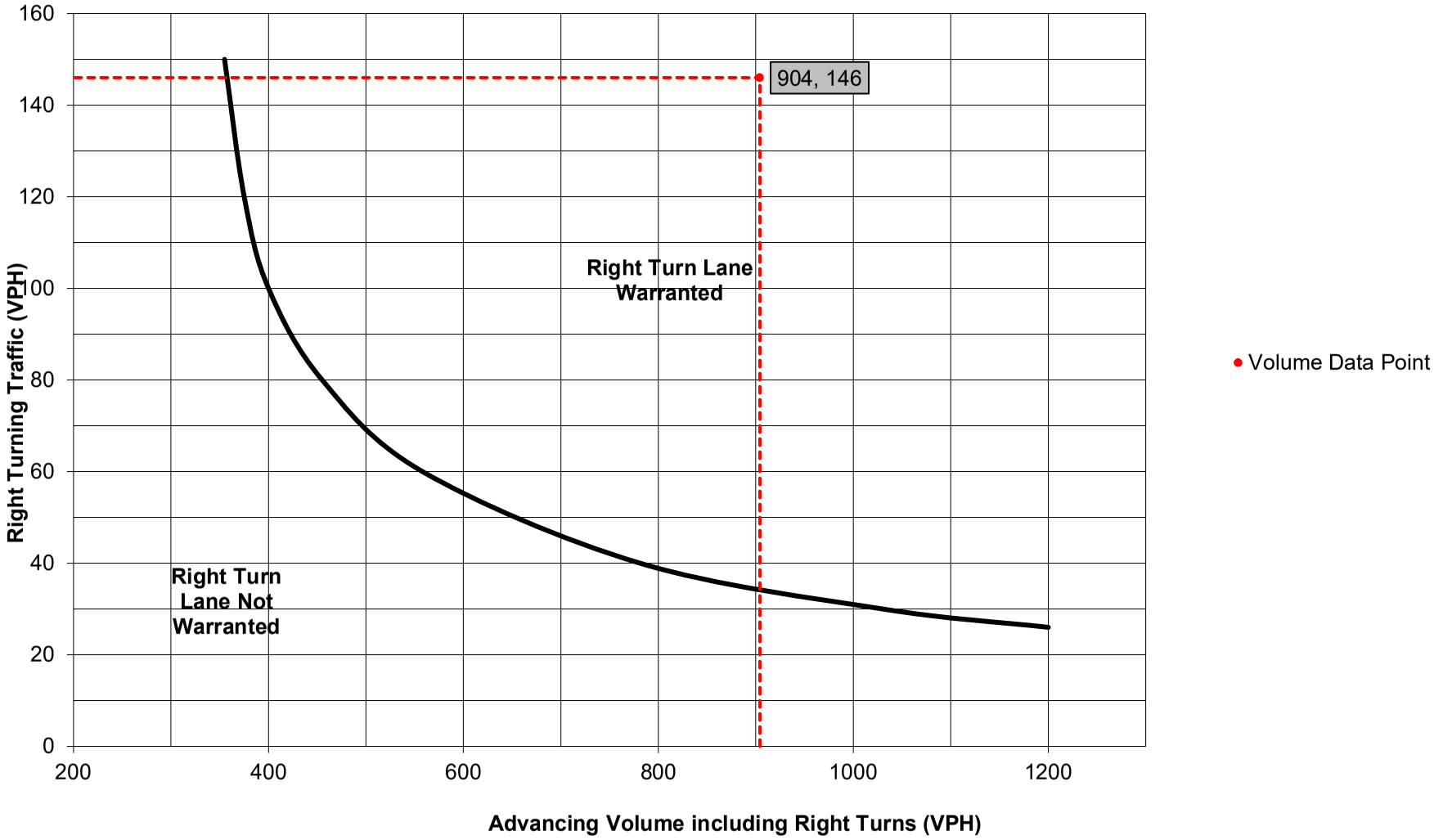
Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	161	Feet
Required Right Turn Lane Storage Length:	175	Feet

Additional Findings:

N/A

Additional Comments / Justifications:

Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Upper Allen Township	**Analysis Date:**	1/24/2022
County:	Cumberland County	**Conducted By:**	MEA
PennDOT Engineering District:	8	**Checked By:**	
		Agency/Company Name:	ALPHA CEI

Intersection & Approach Description: Gettysburg Pike / Proposed Site Driveway 3 Southbound Advancing

Analysis Period:	2027 Build	**Number of Approach Lanes:**	1
Design Hour:	AM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	25		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	91	2.0%	92
	Through	-	256	2.0%	259
	Right	Yes	0	0.0%	0
Opposing	Left	Yes	0	0.0%	0
	Through	-	498	1.0%	501
	Right	Yes	0	2.0%	0

Advancing Volume:	351
Opposing Volume:	501
Left Turn Volume:	92
% Left Turns in Advancing Volume:	26.21%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	91	2.0%	N/A
	Through	-	256	2.0%	N/A
	Right	-	0	0.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: **Figure 1**

Warrant Met?: **Yes**

Right Turn Lane Warrant Findings

Applicable Warrant Figure: **N/A**

Warrant Met?: **N/A**

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	92
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	0

Average # of Vehicles/Cycle: 2.0

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

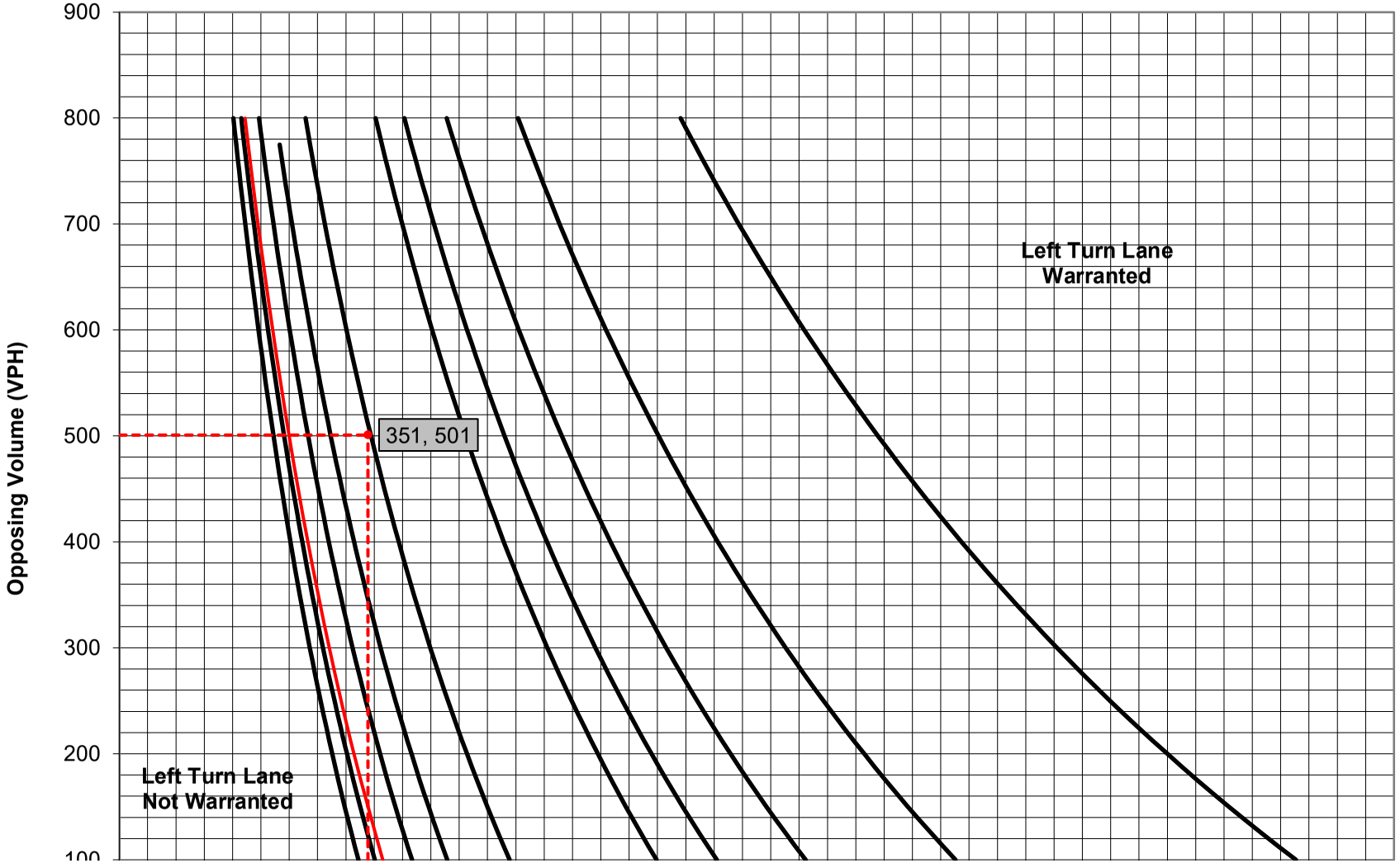
Left Turn Lane Storage Length, Condition A:	**100**	**Feet**
Condition B:	**N/A**	**Feet**
Condition C:	**N/A**	**Feet**
Required Left Turn Lane Storage Length:	**100**	**Feet**

Additional Findings:

N/A

Additional Comments / Justifications:

Figure 1. Warrant for left turn lanes on two-lane roadways (speeds to 35 mph, unsignalized and signalized intersections)
(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Upper Allen Township	**Analysis Date:**	1/24/2022
County:	Cumberland County	**Conducted By:**	MEA
PennDOT Engineering District:	8	**Checked By:**	
		Agency/Company Name:	ALPHA CEI

Intersection & Approach Description: Gettysburg Pike / Proposed Site Driveway 3 Northbound Advancing

Analysis Period:	2027 Build	**Number of Approach Lanes:**	1
Design Hour:	AM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	25		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	N/A
	Through	-	498	1.0%	N/A
	Right	Yes	0	0.0%	N/A
Opposing	Left	Yes	91	2.0%	N/A
	Through	-	256	2.0%	N/A
	Right	Yes	0	0.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	0
	Through	-	498	1.0%	501
	Right	-	0	0.0%	0

Advancing Volume:	501
Right Turn Volume:	0

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 9

Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	0
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	0

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

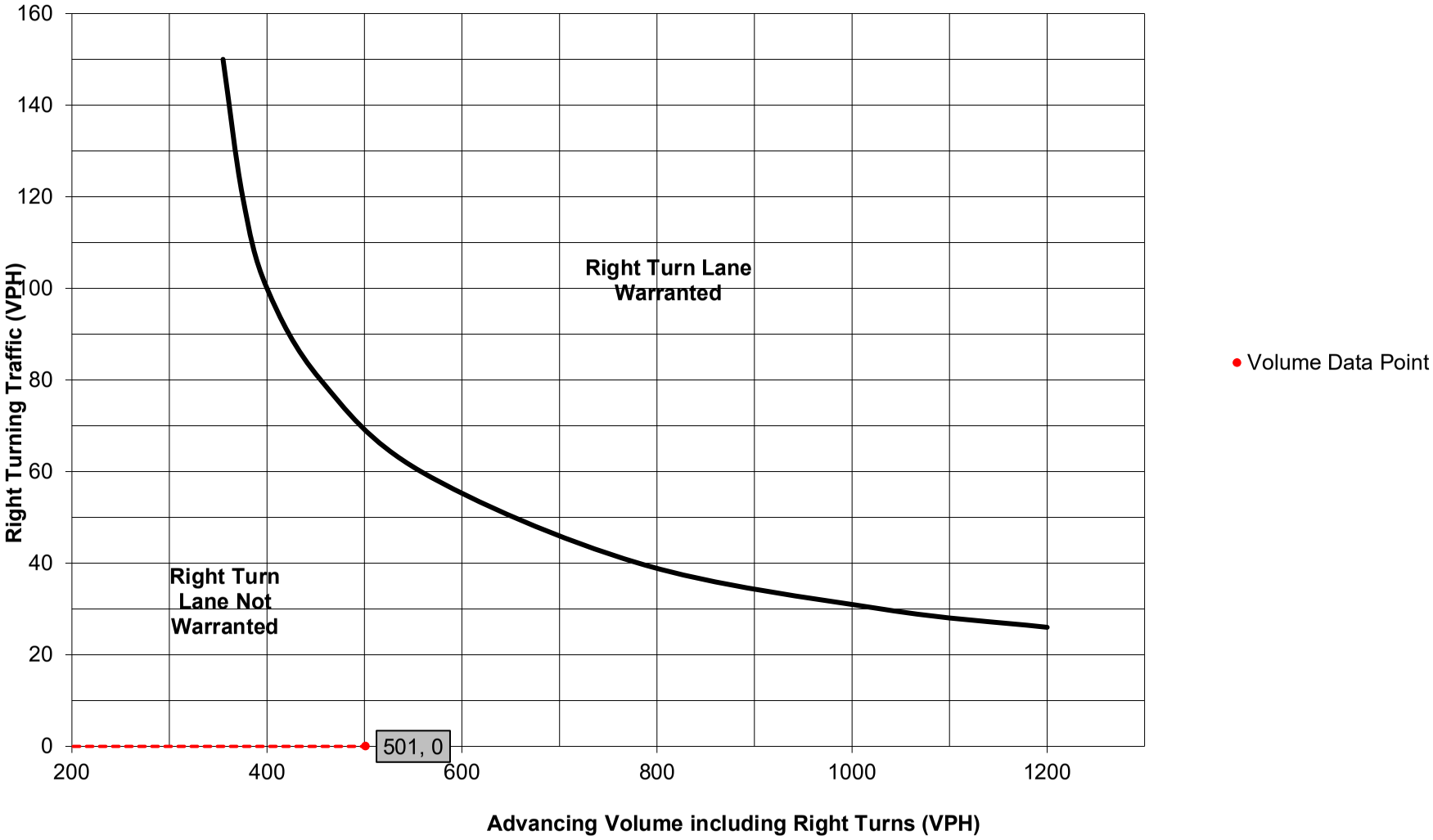
Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings:

N/A

Additional Comments / Justifications:

Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Upper Allen Township	**Analysis Date:**	1/24/2022
County:	Cumberland County	**Conducted By:**	MEA
PennDOT Engineering District:	8	**Checked By:**	
		Agency/Company Name:	ALPHA CEI

Intersection & Approach Description: Gettysburg Pike / Proposed Site Driveway 4 Northbound Advancing

Analysis Period:	2027 Build	**Number of Approach Lanes:**	1
Design Hour:	AM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	25		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	N/A
	Through	-	449	1.0%	N/A
	Right	Yes	23	2.0%	N/A
Opposing	Left	Yes	0	0.0%	N/A
	Through	-	269	1.0%	N/A
	Right	Yes	0	0.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	0
	Through	-	449	1.0%	452
	Right	-	23	2.0%	24

Advancing Volume:	476
Right Turn Volume:	24

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 9

Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	24
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	0

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

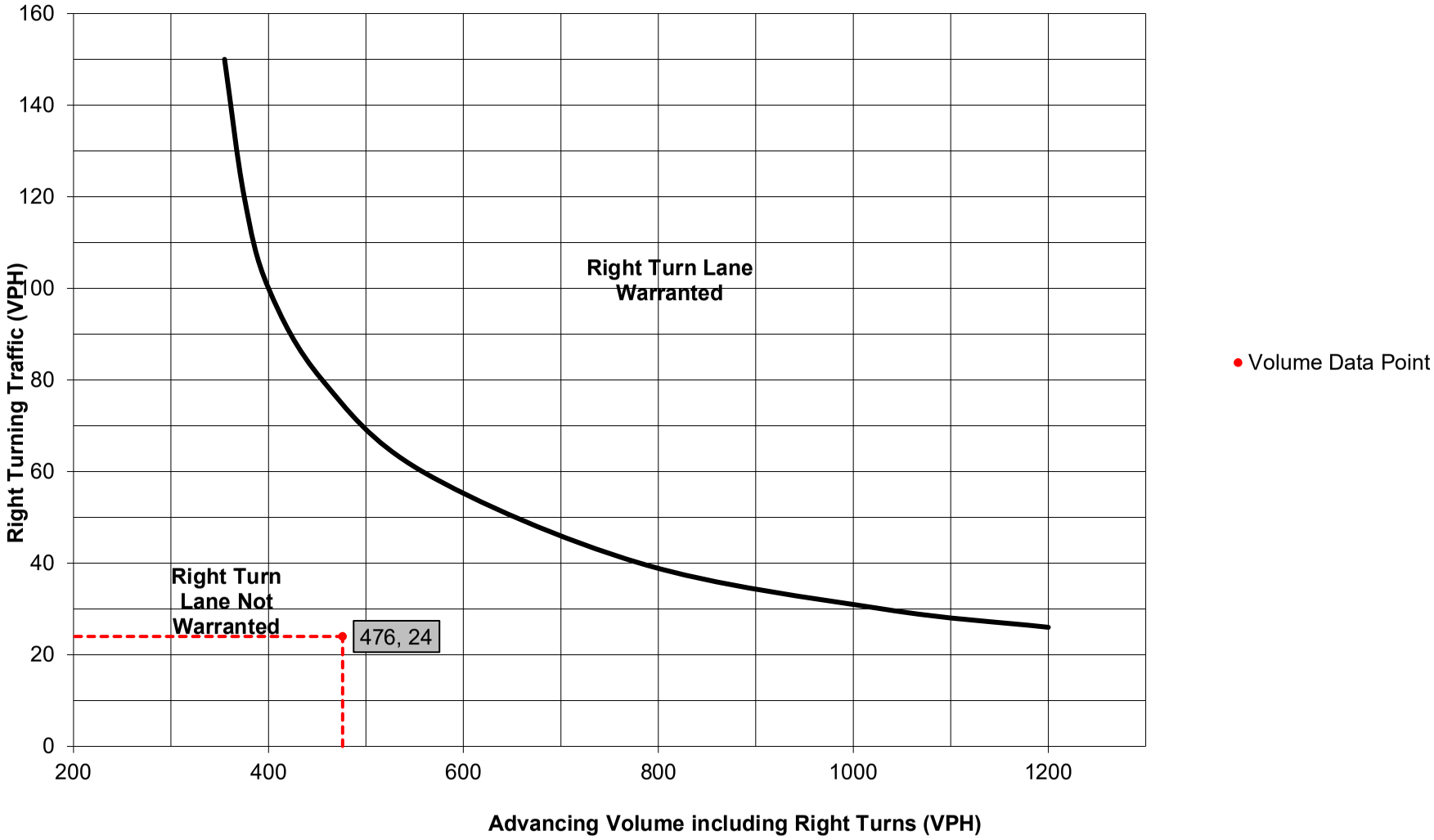
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Upper Allen Township	**Analysis Date:**	1/24/2022
County:	Cumberland County	**Conducted By:**	MEA
PennDOT Engineering District:	8	**Checked By:**	
		Agency/Company Name:	ALPHA CEI

Intersection & Approach Description: Gettysburg Pike / Proposed Site Driveway 1 Southbound Advancing

Analysis Period:	2027 Build	**Number of Approach Lanes:**	1
Design Hour:	PM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	33	2.0%	34
	Through	-	270	3.0%	275
	Right	Yes	0	0.0%	0
Opposing	Left	Yes	0	0.0%	0
	Through	-	238	2.0%	241
	Right	Yes	108	2.0%	110

Advancing Volume:	309
Opposing Volume:	351
Left Turn Volume:	34
% Left Turns in Advancing Volume:	11.00%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	33	2.0%	N/A
	Through	-	270	3.0%	N/A
	Right	-	0	0.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 1

Warrant Met?: No

Right Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	34
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	0

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Left Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Left Turn Lane Storage Length:	N/A	Feet

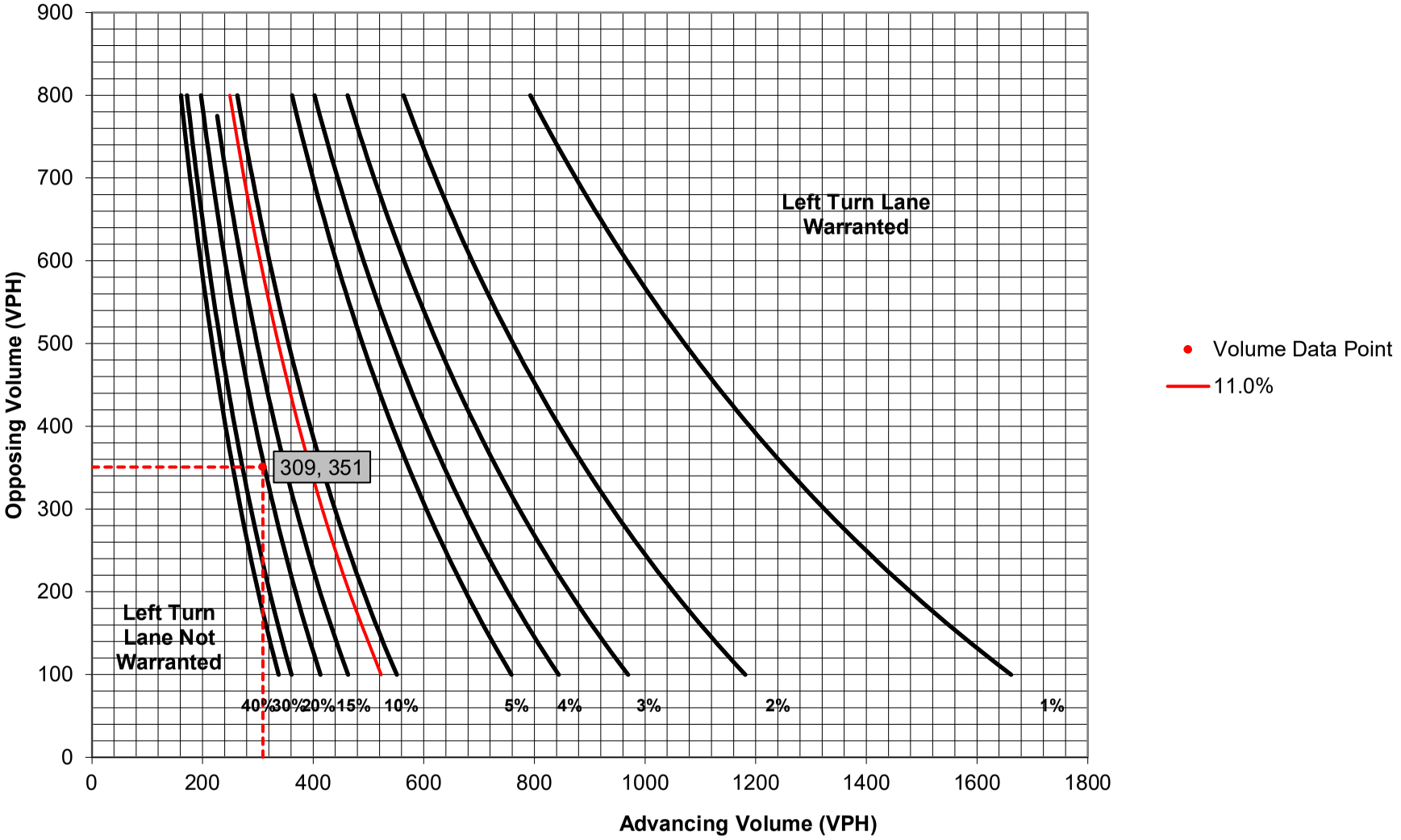
Additional Findings:

N/A

Additional Comments / Justifications:

Figure 1. Warrant for left turn lanes on two-lane roadways (speeds to 35 mph, unsignalized and signalized intersections)

(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Upper Allen Township	**Analysis Date:**	1/24/2022
County:	Cumberland County	**Conducted By:**	MEA
PennDOT Engineering District:	8	**Checked By:**	
		Agency/Company Name:	ALPHA CEI

Intersection & Approach Description: Gettysburg Pike / Proposed Site Driveway 1 Northbound Advancing

Analysis Period:	2027 Build	**Number of Approach Lanes:**	1
Design Hour:	PM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	25		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	N/A
	Through	-	238	2.0%	N/A
	Right	Yes	108	2.0%	N/A
Opposing	Left	Yes	33	2.0%	N/A
	Through	-	270	3.0%	N/A
	Right	Yes	0	0.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	0
	Through	-	238	2.0%	241
	Right	-	108	2.0%	110

Advancing Volume:	351
Right Turn Volume:	110

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 9

Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	110
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	0

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

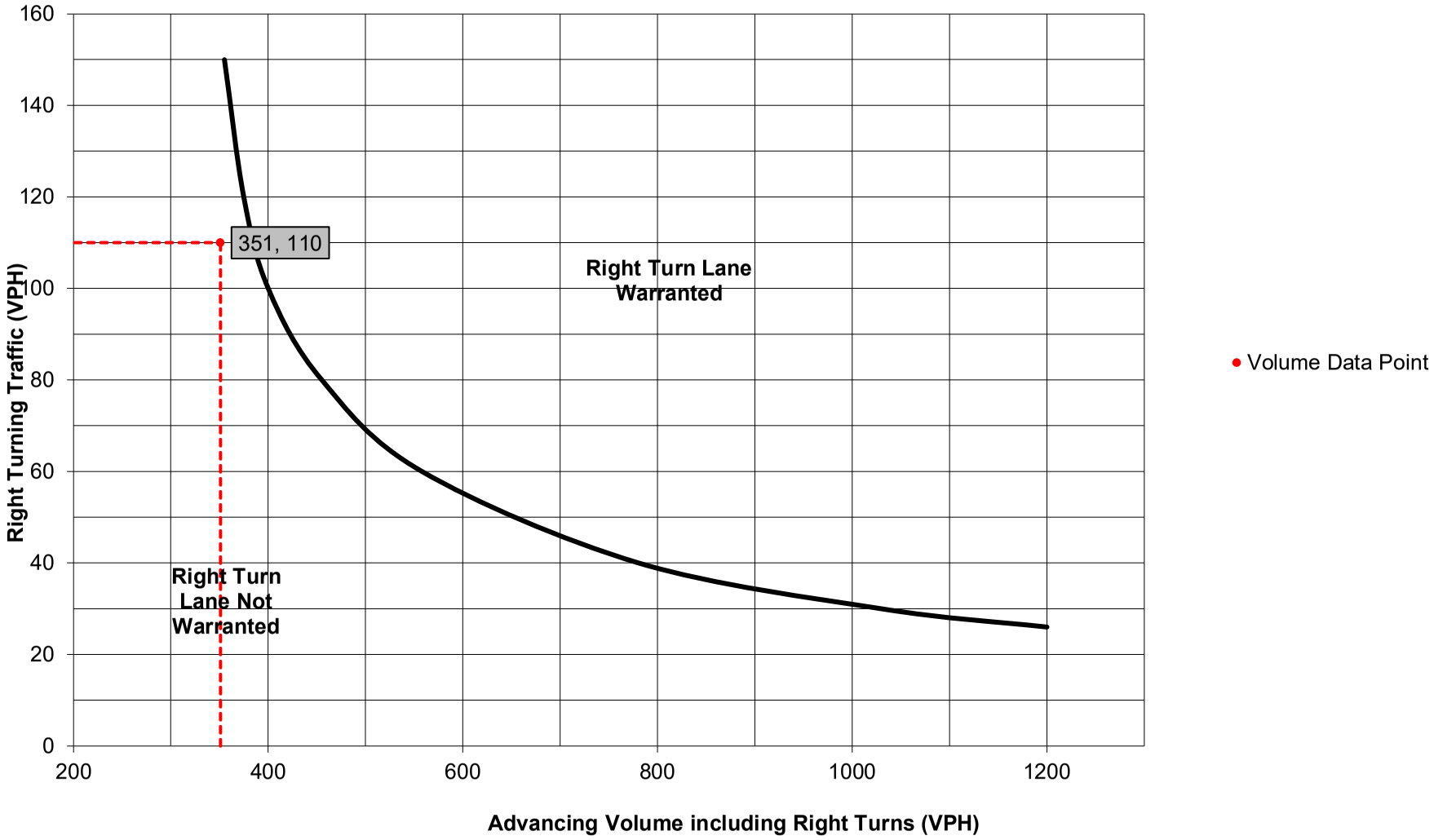
Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings:

N/A

Additional Comments / Justifications:

Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Upper Allen Township	**Analysis Date:**	1/24/2022
County:	Cumberland County	**Conducted By:**	MEA
PennDOT Engineering District:	8	**Checked By:**	
		Agency/Company Name:	ALPHA CEI

Intersection & Approach Description: South Market Street / Proposed Site Driveway 2 Westbound Advancing

Analysis Period:	2027 Build	**Number of Approach Lanes:**	1
Design Hour:	PM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	40		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	N/A
	Through	-	644	0.0%	N/A
	Right	Yes	93	2.0%	N/A
Opposing	Left	Yes	0	0.0%	N/A
	Through	-	0	0.0%	N/A
	Right	Yes	0	0.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	0
	Through	-	644	0.0%	644
	Right	-	93	2.0%	94

Advancing Volume:	738
Right Turn Volume:	94

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 9

Warrant Met?: Yes

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	94
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	0

Average # of Vehicles/Cycle: 2.0

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

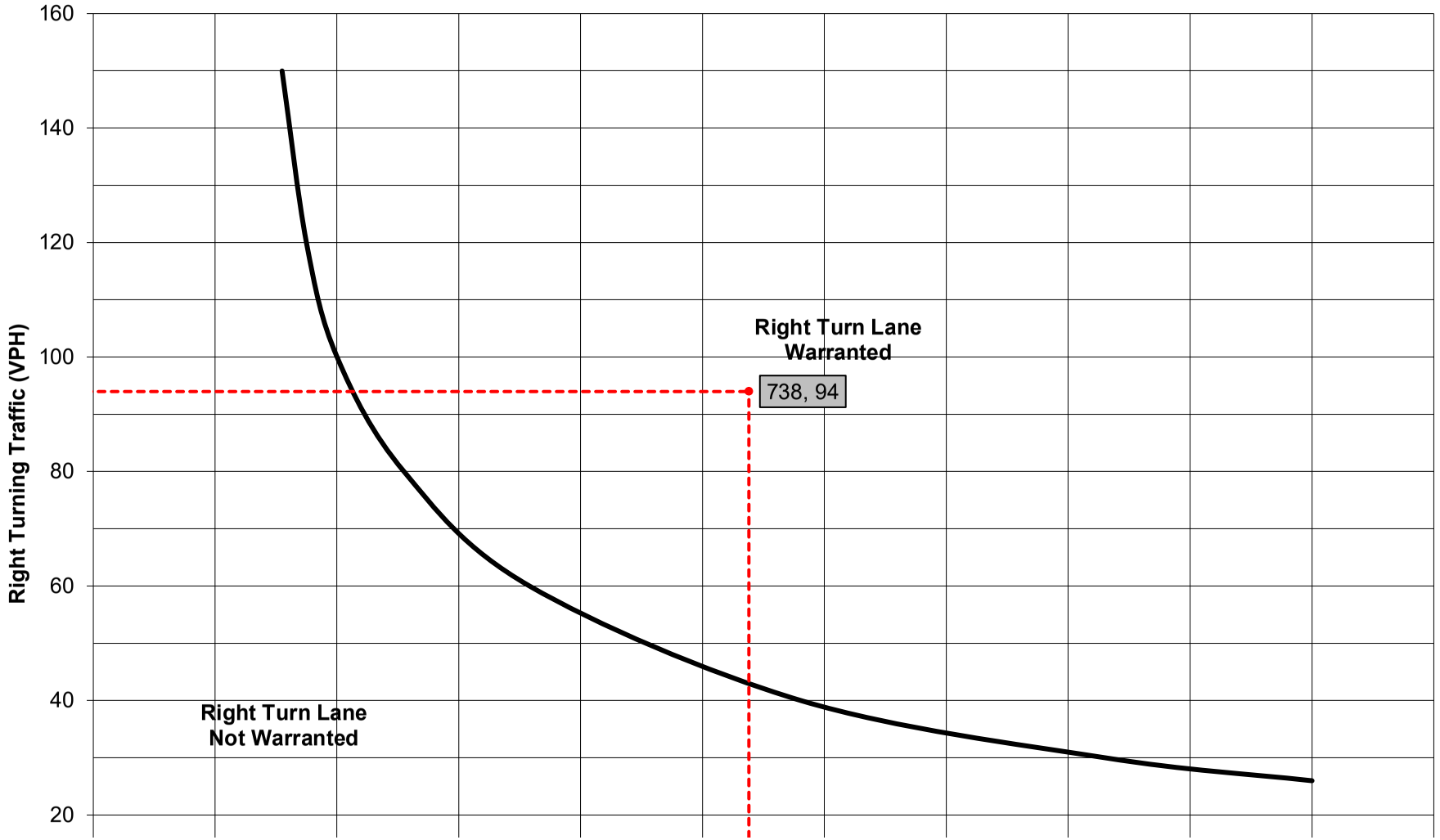
Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	161	Feet
Required Right Turn Lane Storage Length:	175	Feet

Additional Findings:

N/A

Additional Comments / Justifications:

Figure 9. Warrant for right turn lanes on two-lane roadways (40 mph or lower speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Upper Allen Township	**Analysis Date:**	1/24/2022
County:	Cumberland County	**Conducted By:**	MEA
PennDOT Engineering District:	8	**Checked By:**	
		Agency/Company Name:	ALPHA CEI

Intersection & Approach Description: Gettysburg Pike / Proposed Site Driveway 3 Southbound Advancing

Analysis Period:	2027 Build	**Number of Approach Lanes:**	1
Design Hour:	PM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	25		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	84	2.0%	85
	Through	-	404	3.0%	411
	Right	Yes	0	0.0%	0
Opposing	Left	Yes	0	0.0%	0
	Through	-	347	2.0%	351
	Right	Yes	0	2.0%	0

Advancing Volume:	496
Opposing Volume:	351
Left Turn Volume:	85
% Left Turns in Advancing Volume:	17.14%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	84	2.0%	N/A
	Through	-	404	3.0%	N/A
	Right	-		0.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 1

Warrant Met?: Yes

Right Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	85
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	0

Average # of Vehicles/Cycle: 1.0

PennDOT Publication 46, Exhibit 11-6

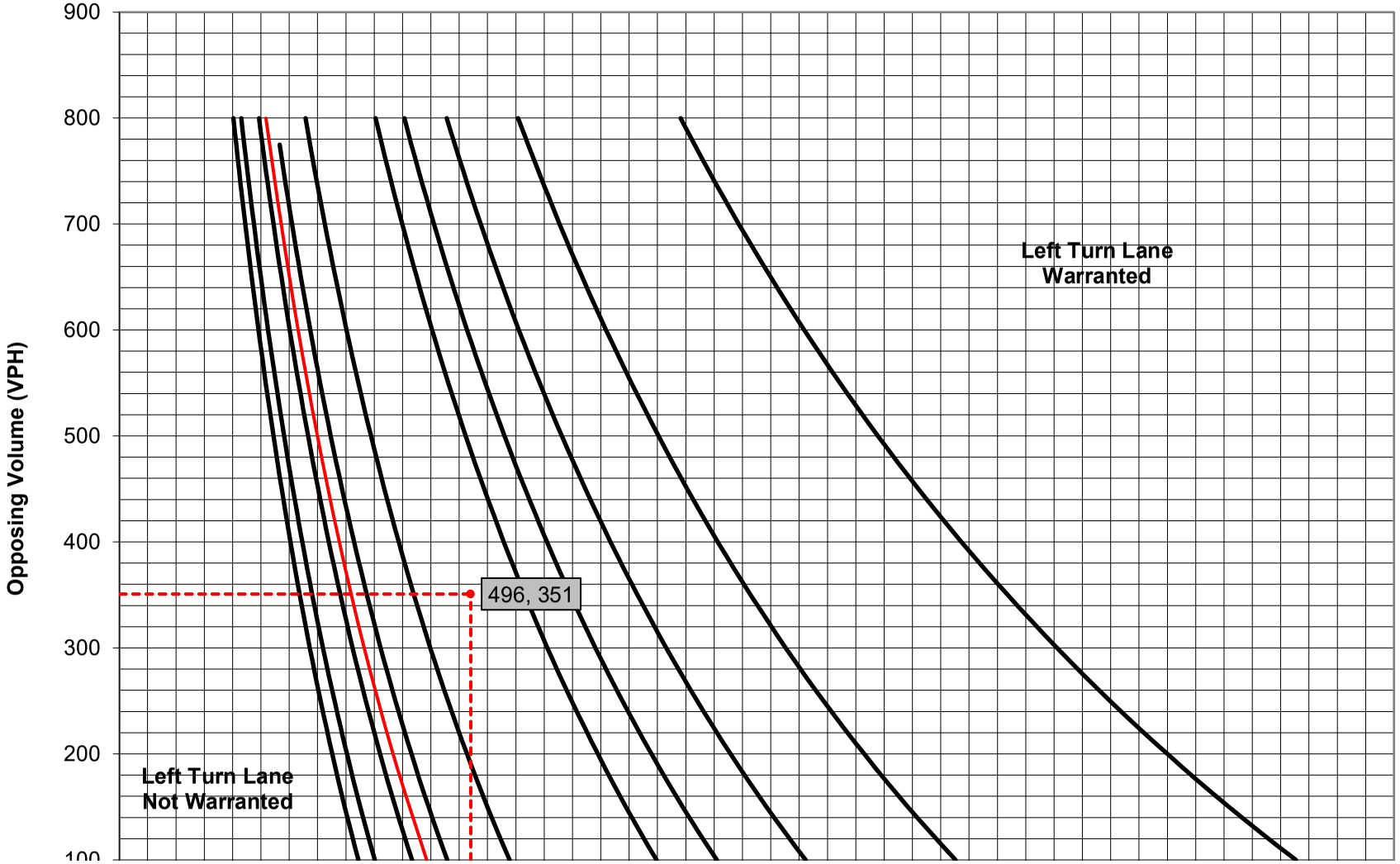
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Left Turn Lane Storage Length, Condition A:	75	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Left Turn Lane Storage Length:	75	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 1. Warrant for left turn lanes on two-lane roadways (speeds to 35 mph, unsignalized and signalized intersections)
(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Upper Allen Township	**Analysis Date:**	1/24/2022
County:	Cumberland County	**Conducted By:**	MEA
PennDOT Engineering District:	8	**Checked By:**	
		Agency/Company Name:	ALPHA CEI

Intersection & Approach Description: Gettysburg Pike / Proposed Site Driveway 3 Northbound Advancing

Analysis Period:	2027 Build	**Number of Approach Lanes:**	1
Design Hour:	PM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	25		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	N/A
	Through	-	347	2.0%	N/A
	Right	Yes	0	0.0%	N/A
Opposing	Left	Yes	84	2.0%	N/A
	Through	-	404	3.0%	N/A
	Right	Yes		0.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	0
	Through	-	347	2.0%	351
	Right	-	0	0.0%	0

Advancing Volume:	351
Right Turn Volume:	0

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 9

Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	0
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	0

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

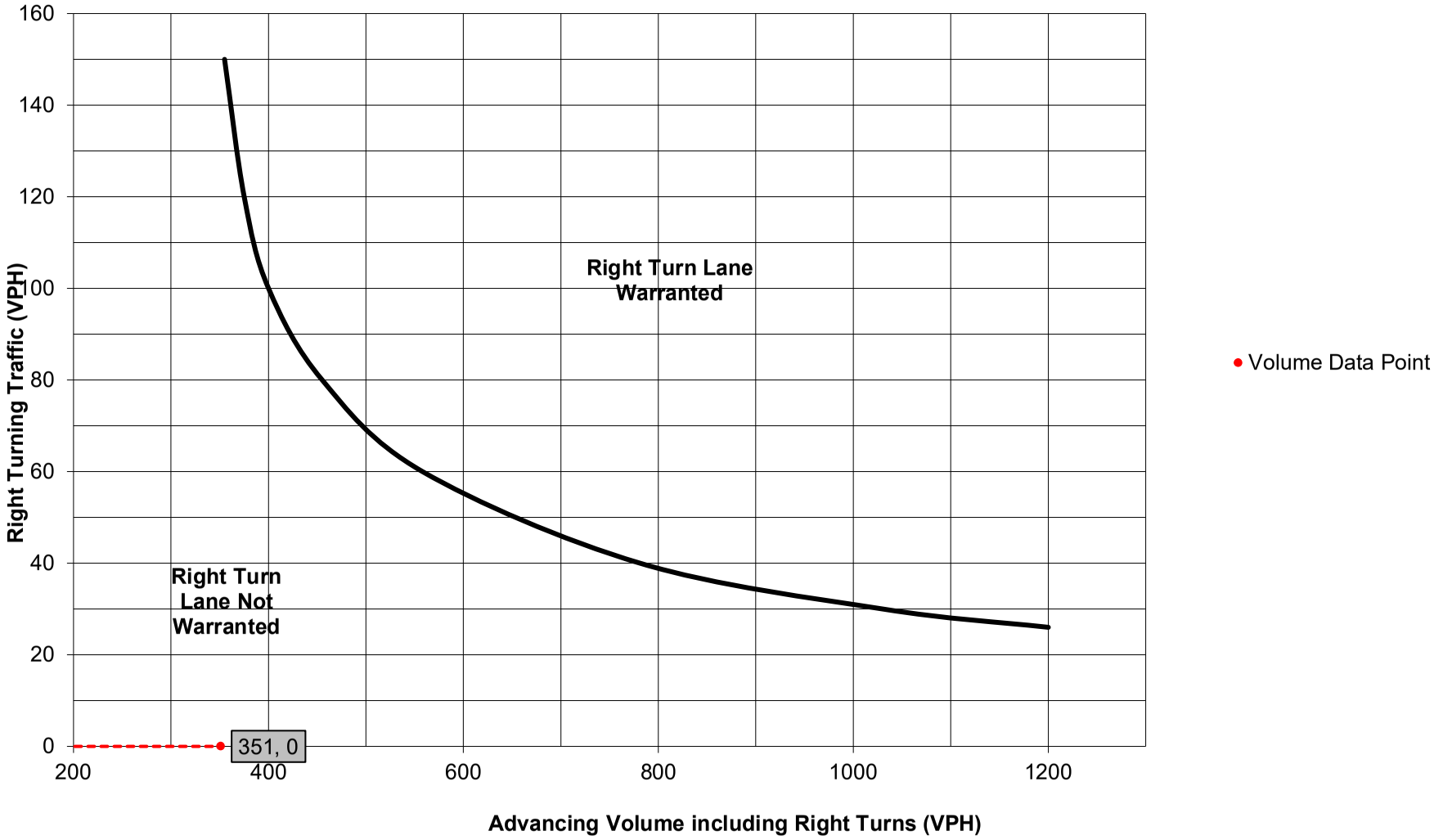
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Upper Allen Township	**Analysis Date:**	1/24/2022
County:	Cumberland County	**Conducted By:**	MEA
PennDOT Engineering District:	8	**Checked By:**	
		Agency/Company Name:	ALPHA CEI

Intersection & Approach Description: Gettysburg Pike / Proposed Site Driveway 4 Northbound Advancing

Analysis Period:	2027 Build	**Number of Approach Lanes:**	1
Design Hour:	PM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	25		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	N/A
	Through	-	308	2.0%	N/A
	Right	Yes	13	2.0%	N/A
Opposing	Left	Yes	0	0.0%	N/A
	Through	-	420	3.0%	N/A
	Right	Yes	0	0.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	0
	Through	-	308	2.0%	312
	Right	-	13	2.0%	14

Advancing Volume:	326
Right Turn Volume:	14

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 9

Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	14
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	0

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

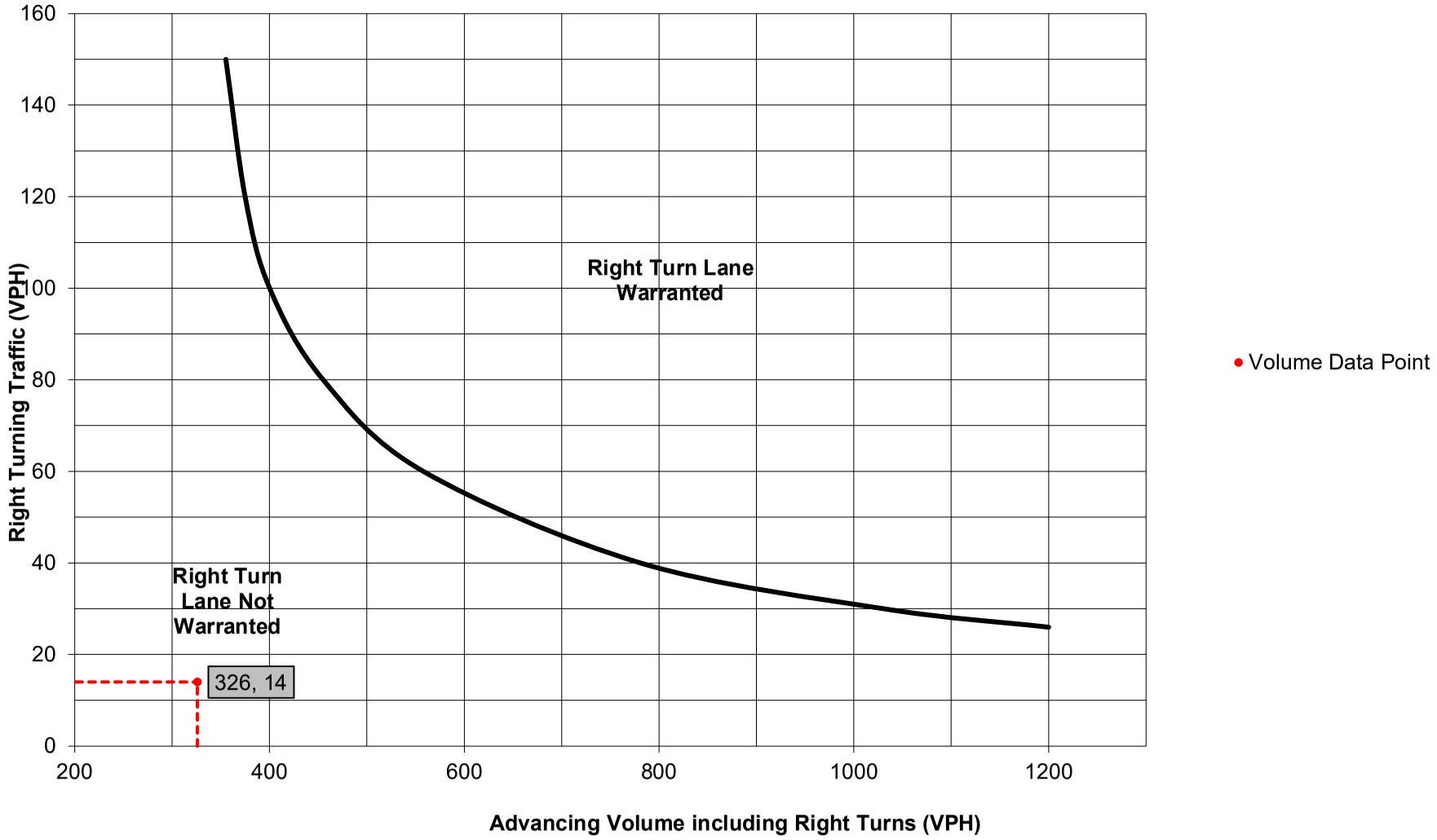
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Upper Allen Township	**Analysis Date:**	1/24/2022
County:	Cumberland County	**Conducted By:**	MEA
PennDOT Engineering District:	8	**Checked By:**	
		Agency/Company Name:	ALPHA CEI

Intersection & Approach Description: Gettysburg Pike / Proposed Site Driveway 1 Southbound Advancing

Analysis Period:	2027 Build	**Number of Approach Lanes:**	1
Design Hour:	Saturday Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	37	2.0%	38
	Through	-	244	3.0%	248
	Right	Yes	0	0.0%	0
Opposing	Left	Yes	0	0.0%	0
	Through	-	218	2.0%	221
	Right	Yes	107	2.0%	109

Advancing Volume:	286
Opposing Volume:	330
Left Turn Volume:	38
% Left Turns in Advancing Volume:	13.29%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	37	2.0%	N/A
	Through	-	244	3.0%	N/A
	Right	-	0	0.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 1

Warrant Met?: No

Right Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	38
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	0

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

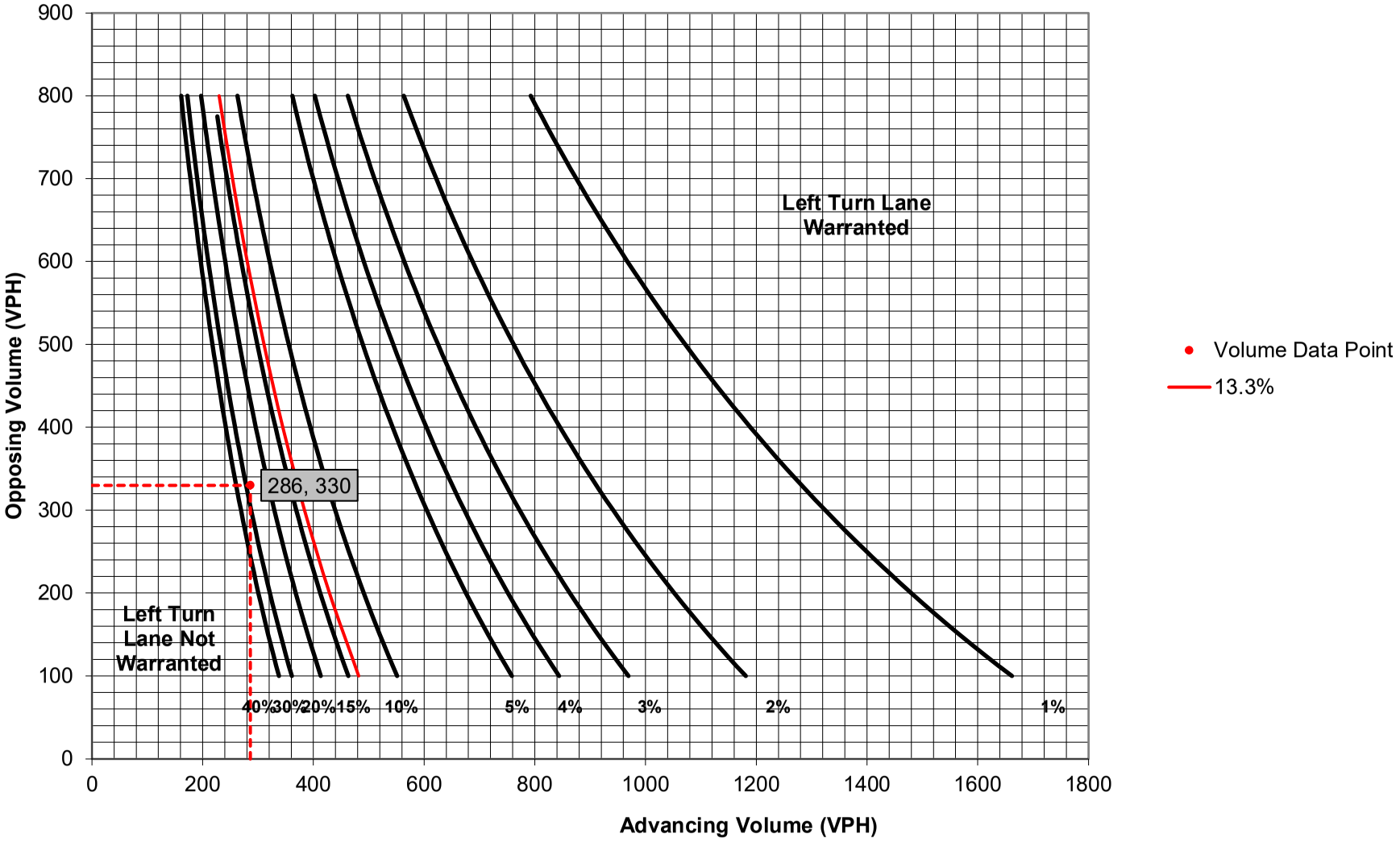
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Left Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Left Turn Lane Storage Length:	N/A	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 1. Warrant for left turn lanes on two-lane roadways (speeds to 35 mph, unsignalized and signalized intersections)
(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Upper Allen Township	**Analysis Date:**	1/24/2022
County:	Cumberland County	**Conducted By:**	MEA
PennDOT Engineering District:	8	**Checked By:**	
		Agency/Company Name:	ALPHA CEI

Intersection & Approach Description: Gettysburg Pike / Proposed Site Driveway 1 Northbound Advancing

Analysis Period:	2027 Build	**Number of Approach Lanes:**	1
Design Hour:	Saturday Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	25		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	N/A
	Through	-	218	2.0%	N/A
	Right	Yes	107	2.0%	N/A
Opposing	Left	Yes	37	2.0%	N/A
	Through	-	244	3.0%	N/A
	Right	Yes	0	0.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	0
	Through	-	218	2.0%	221
	Right	-	107	2.0%	109

Advancing Volume:	330
Right Turn Volume:	109

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 9

Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	109
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	0

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

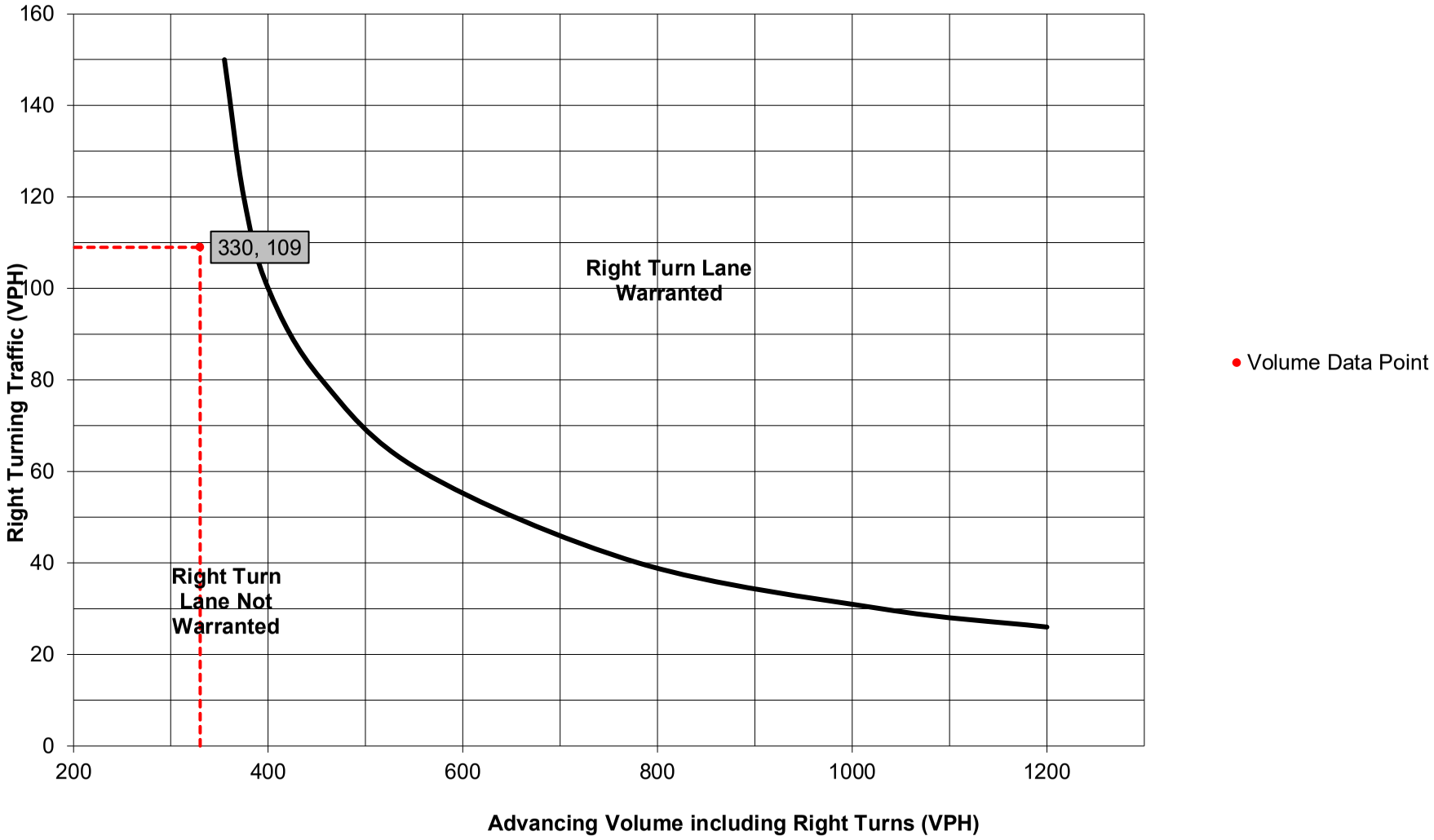
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Upper Allen Township	**Analysis Date:**	1/24/2022
County:	Cumberland County	**Conducted By:**	MEA
PennDOT Engineering District:	8	**Checked By:**	
		Agency/Company Name:	ALPHA CEI

Intersection & Approach Description: South Market Street / Proposed Site Driveway 2 Westbound Advancing

Analysis Period:	2027 Build	**Number of Approach Lanes:**	1
Design Hour:	SAT Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	40		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	N/A
	Through	-	602	0.0%	N/A
	Right	Yes	126	2.0%	N/A
Opposing	Left	Yes	0	0.0%	N/A
	Through	-	0	0.0%	N/A
	Right	Yes	0	0.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	0
	Through	-	602	0.0%	602
	Right	-	126	2.0%	128

Advancing Volume:	730
Right Turn Volume:	128

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 9

Warrant Met?: Yes

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	128
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	0

Average # of Vehicles/Cycle: 2.0

PennDOT Publication 46, Exhibit 11-6

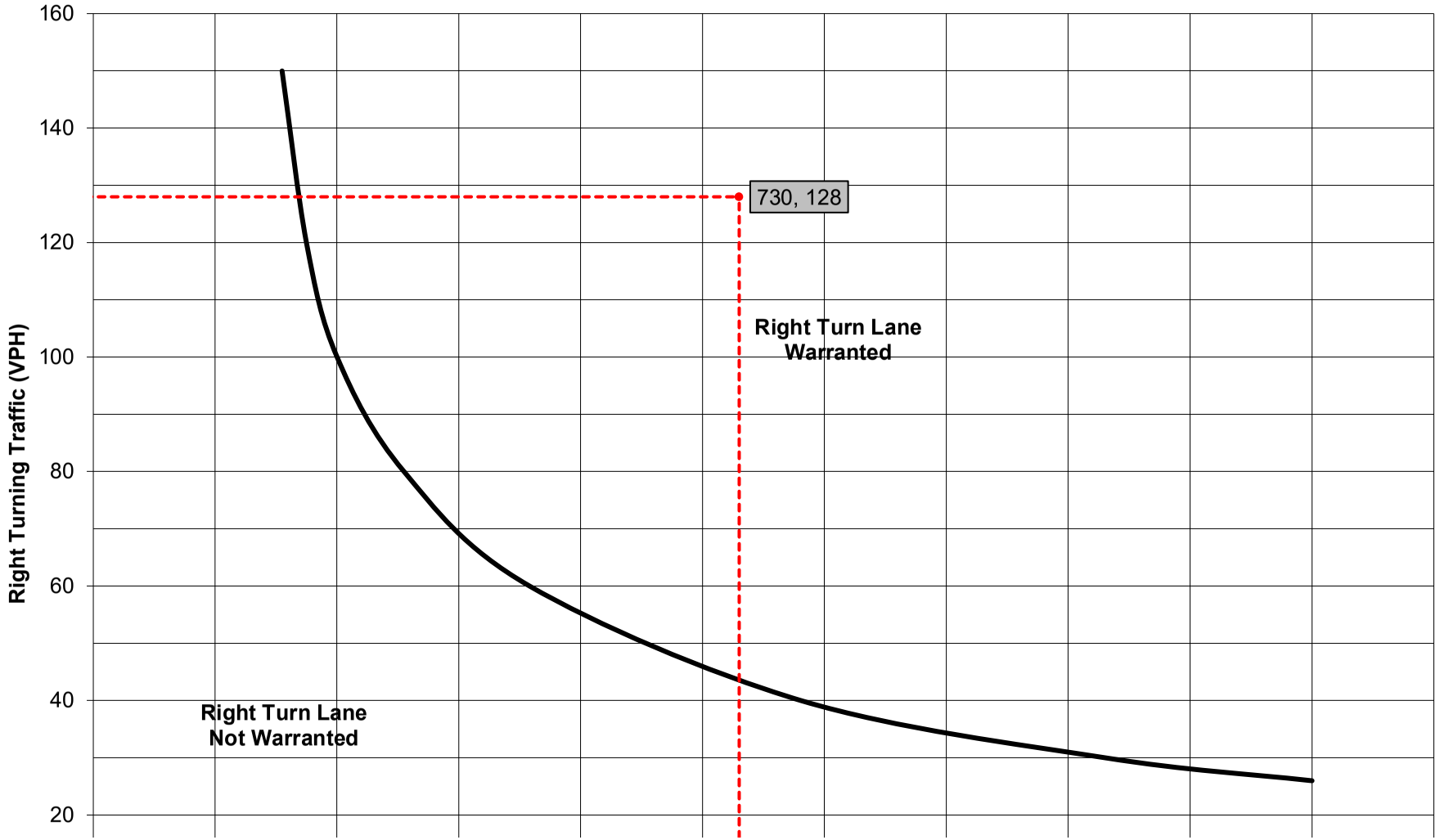
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	161	Feet
Required Right Turn Lane Storage Length:	175	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 9. Warrant for right turn lanes on two-lane roadways (40 mph or lower speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Upper Allen Township	**Analysis Date:**	1/24/2022
County:	Cumberland County	**Conducted By:**	MEA
PennDOT Engineering District:	8	**Checked By:**	
		Agency/Company Name:	ALPHA CEI

Intersection & Approach Description: Gettysburg Pike / Proposed Site Driveway 3 Southbound Advancing

Analysis Period:	2027 Build	**Number of Approach Lanes:**	1
Design Hour:	Saturday Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	25		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	156	2.0%	158
	Through	-	236	3.0%	240
	Right	Yes	0	0.0%	0
Opposing	Left	Yes	0	0.0%	0
	Through	-	334	0.0%	334
	Right	Yes	0	0.0%	0

Advancing Volume:	398
Opposing Volume:	334
Left Turn Volume:	158
% Left Turns in Advancing Volume:	39.70%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	N/A
	Through	-	334	0.0%	N/A
	Right	-	0	0.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: **Figure 1**

Warrant Met?: **Yes**

Right Turn Lane Warrant Findings

Applicable Warrant Figure: **N/A**

Warrant Met?: **N/A**

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	158
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	0

Average # of Vehicles/Cycle: 3.0

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

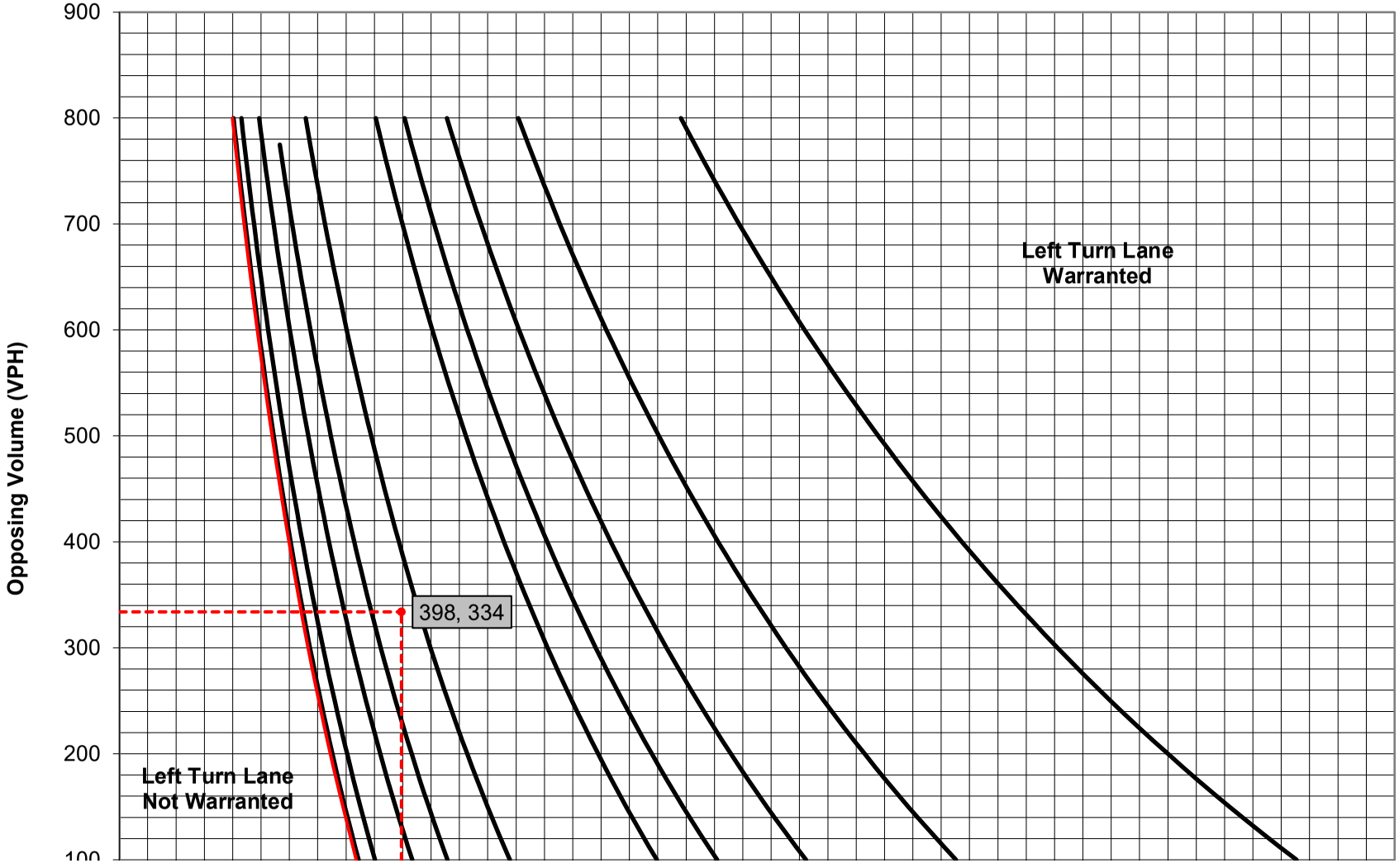
Left Turn Lane Storage Length, Condition A:	**150**	**Feet**
Condition B:	**N/A**	**Feet**
Condition C:	**N/A**	**Feet**
Required Left Turn Lane Storage Length:	**150**	**Feet**

Additional Findings:

N/A

Additional Comments / Justifications:

Figure 1. Warrant for left turn lanes on two-lane roadways (speeds to 35 mph, unsignalized and signalized intersections)
(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Upper Allen Township	**Analysis Date:**	1/24/2022
County:	Cumberland County	**Conducted By:**	MEA
PennDOT Engineering District:	8	**Checked By:**	
		Agency/Company Name:	ALPHA CEI

Intersection & Approach Description: Gettysburg Pike / Proposed Site Driveway 3 Northbound Advancing

Analysis Period:	2027 Build	**Number of Approach Lanes:**	1
Design Hour:	Saturday Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	25		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	N/A
	Through	-	334	0.0%	N/A
	Right	Yes	0	0.0%	N/A
Opposing	Left	Yes	156	2.0%	N/A
	Through	-	236	3.0%	N/A
	Right	Yes	0	0.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	0
	Through	-	334	0.0%	334
	Right	-	0	0.0%	0

Advancing Volume:	334
Right Turn Volume:	0

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 9

Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	0
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	0

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

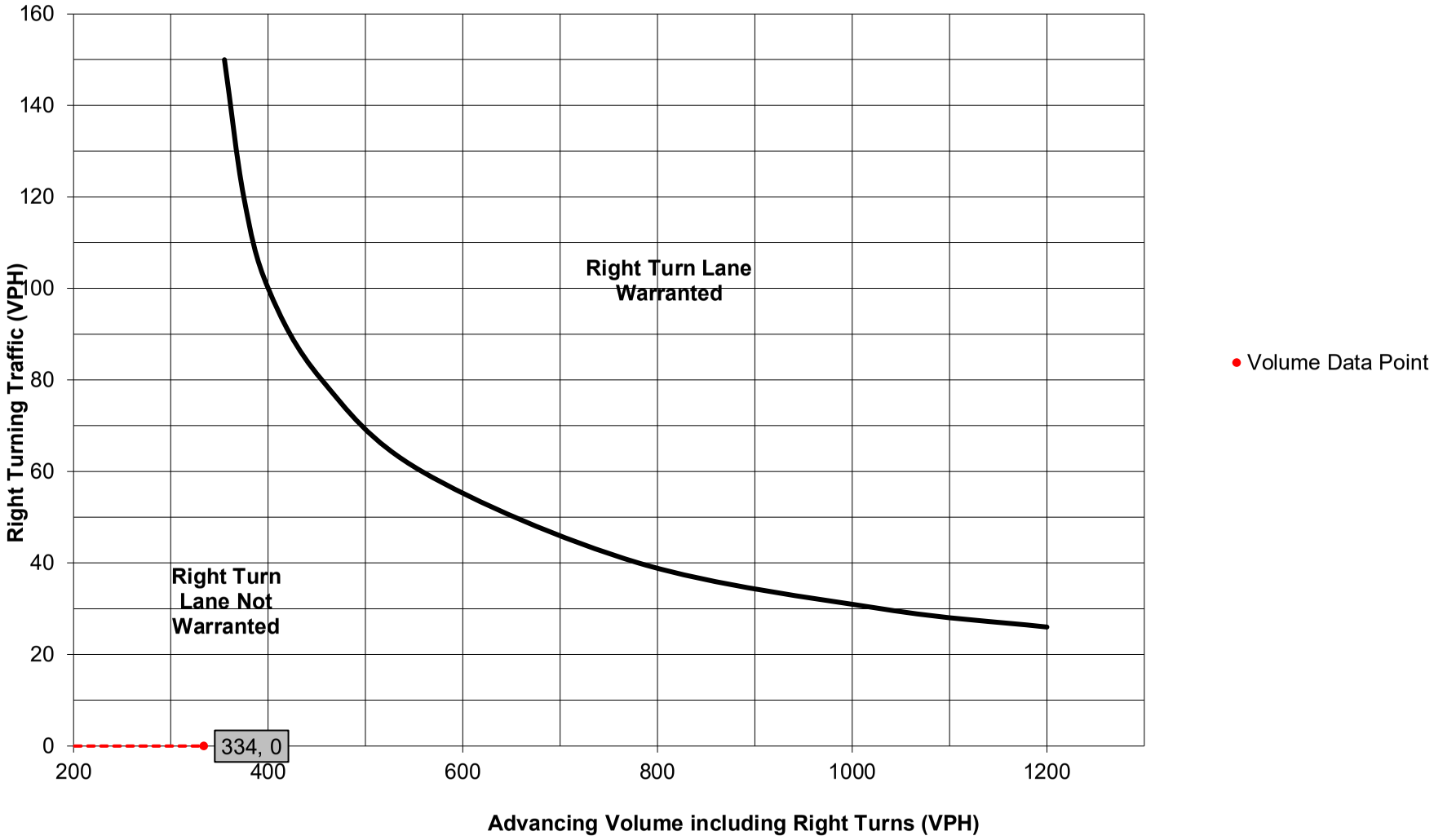
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)



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STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Upper Allen Township	**Analysis Date:**	1/24/2022
County:	Cumberland County	**Conducted By:**	MEA
PennDOT Engineering District:	8	**Checked By:**	
		Agency/Company Name:	ALPHA CEI

Intersection & Approach Description: Gettysburg Pike / Proposed Site Driveway 4 Northbound Advancing

Analysis Period:	2027 Build	**Number of Approach Lanes:**	1
Design Hour:	SAT Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	25		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	N/A
	Through	-	261	2.0%	N/A
	Right	Yes	23	2.0%	N/A
Opposing	Left	Yes	0	0.0%	N/A
	Through	-	257	3.0%	N/A
	Right	Yes	0	0.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	0
	Through	-	261	2.0%	264
	Right	-	23	2.0%	24

Advancing Volume:	288
Right Turn Volume:	24

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 9

Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	24
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	0

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

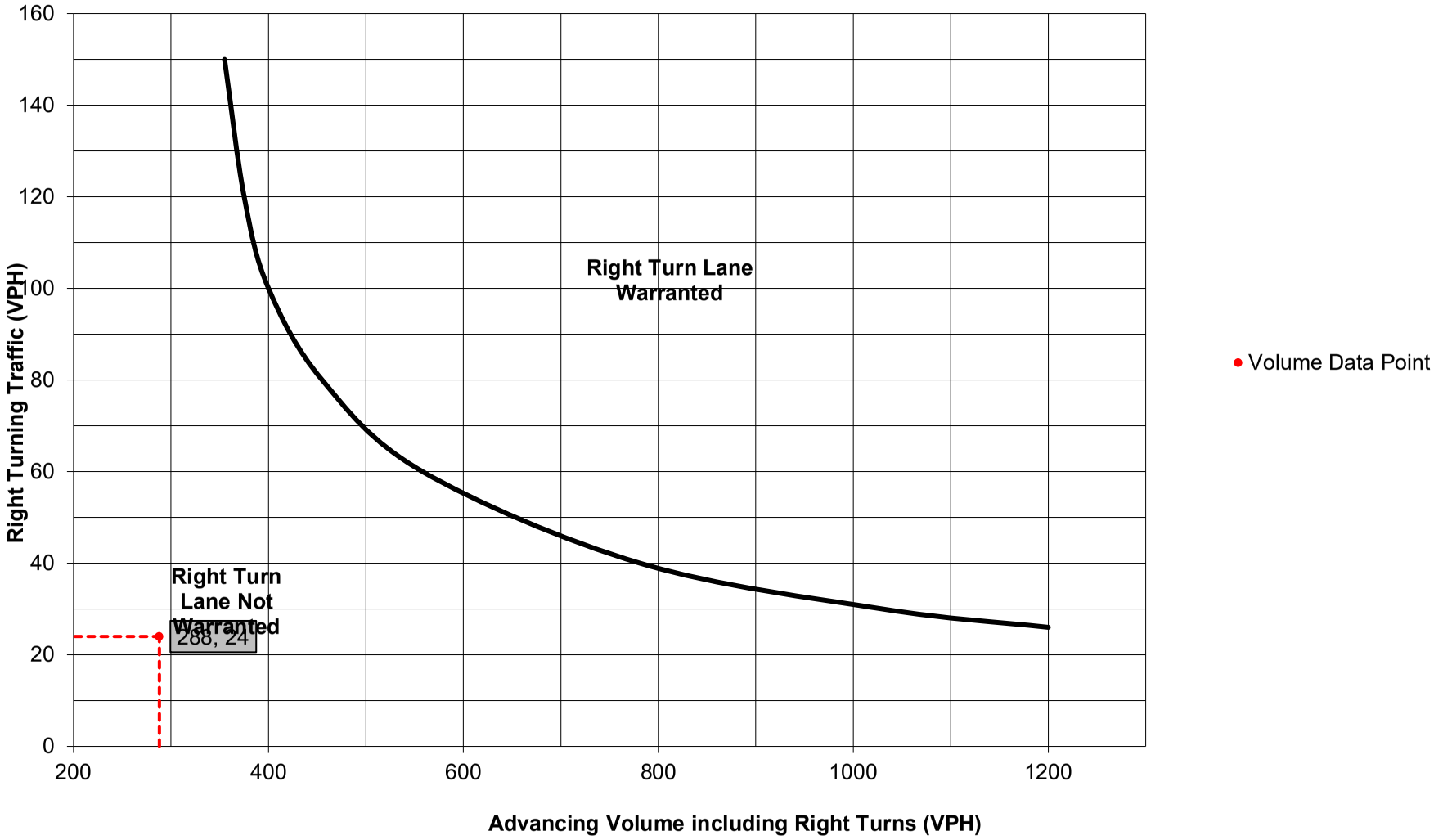
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)



Adjacent Development

May 2, 2019
TPD# WMSC.0005

Est. 1989

TRAFFIC PLANNING AND DESIGN, INC.





S. Market Street Office Building

Transportation Impact Study

Upper Allen Township, Cumberland County, PA

For Submission To:

PennDOT District 8-0 &
Upper Allen Township, Cumberland County, PA

S. MARKET STREET OFFICE BUILDING
TRANSPORTATION IMPACT STUDY

FOR SUBMISSION TO:

PennDOT District 8-0 &
Upper Allen Township, Cumberland County, PA

Prepared For:
Williams Site Civil, LLC
2325 Paxton Church Road
Harrisburg, PA 17110

May 2, 2019
TPD # WMSC.00005

Prepared By:
Traffic Planning and Design, Inc.
4000 Crums Mill Road, Suite 102
Harrisburg, Pennsylvania 17112

Phone: (717) 234-1430
Fax: (717) 234-4490
E-mail: TPD@TrafficPD.com
Web Site: www.trafficpd.com



Jarred L. Neal, P.E.
Project Manager
Pennsylvania License Number PE083971

EXECUTIVE SUMMARY

The purpose of this Transportation Impact Study (TIS) is to assess the potential traffic impact associated with the proposed S. Market Street Office Building development on the roadway network in Upper Allen Township, Cumberland County, PA. Based on this evaluation, the following conclusions were reached:

1. The project site is located on the northwest corner of the intersection of S. Market Street (S.R. 0114) & Gettysburg Pike (T-621).
2. The project scope and the extent of the study area were confirmed with representatives of PennDOT and Township staff at a meeting on January 23, 2019. The study area intersections included in the TIS are as follows:
   - S. Market Street (SR 0114) and Gettysburg Pike (T-621);
   - S. Market Street (SR 0114) and Country and Town Baptist Church Driveway/Proposed Site Driveway;
   - S. Market Street (SR 0114) and Proposed Right-Out Only Driveway.
3. The proposed development will consist of a 10,000 square-foot medical office building and a 24,888 s.f. general office building at full build-out.
4. Access for the development is proposed via one full-movement driveway to S. Market Street (SR 0114), directly opposite the Country and Town Baptist Church Driveway and one Right-Out Only driveway to S. Market Street (SR 0114) approximately ~250' further west. The proposed driveway location sight distances will exceed PennDOT's Desirable and Safe Stopping Sight Distance (SSSD) criteria with removal of embankment along site frontage.
5. Upon full build-out, the proposed development is expected to generate 58 new vehicle-trips during the weekday A.M peak hour and 65 new vehicle-trips during the weekday P.M peak hour.
6. Under the 2020 and 2030 projected conditions with full build-out of the proposed development and implementation of the recommended roadway improvements, all levels of service (LOS) at the study area intersections comply with the requirements outlined in PennDOT's TIS guidelines.
7. Traffic Planning and Design Inc. (TPD) recommends the following roadway improvements as outlined at the study area intersections:

S. Market Street (SR 0114) Signalized Corridor (School Drive to Kim Acres)

- Optimize signal cycle lengths/splits/offsets throughout the corridor during the weekday A.M. and weekday P.M. peak hour time periods.

S. Market Street (SR 0114) & Gettysburg Pike (T-621)

- Widen S. Market Street to provide a dedicated 225' right-turn lane with a 75' bay taper on the eastbound approach to Gettysburg Pike (T-621).

S. Market Street (SR 0114) & Church Driveway/Proposed Site Driveway

- The proposed driveway should be designed as a low-volume driveway per PennDOT standards;
- Provide a stop sign (PennDOT designation R1-1) to control exiting traffic;
- Widen S. Market Street (SR 0114) to provide a dedicated 75' left-turn lane with a 75' bay taper on the eastbound approach to the site driveway;
- Widen S. Market Street (SR 0114) to provide a dedicated 75' right-turn lane with a 75' bay taper on the westbound approach to the site driveway;
- Remove embankment along site frontage to provide and maintain acceptable sight distances.

S. Market Street (SR 0114) & Proposed Right-Out Only Driveway

- The proposed driveway should be designed as a low-volume driveway per PennDOT standards with exiting left turns and entering movements restricted via intersection geometry;
- Provide a stop sign (PennDOT designation R1-1) to control exiting traffic;
- Remove embankment along site frontage to provide and maintain acceptable sight distances.

8. Levels of Service (LOS) for the study area intersections have been summarized in matrix form. **Table I** details the overall intersection LOS for each study area intersection.

TABLE I
OVERALL INTERSECTION LEVEL OF SERVICE SUMMARY

Intersection	Time Period	Existing	Opening Year 2020			Design Year 2030			Meets LOS Requirements?
			Base	Projected	Projected[1]	Base	Projected	Projected[1]	
S. Market Street (SR 0114) & Gettysburg Pike	A.M.	D (36.9)	D (46.0)	D (50.7)	D (53.5)	E (61.2)	E (67.5)	E (66.9)	YES
	P.M.	C (26.1)	C (27.8)	C (28.8)	C (26.5)	C (31.0)	C (32.8)	C (28.6)	YES
S. Market Street (SR 0114) & Country and Town Baptist Church Driveway/ Proposed Site Driveway	A.M.	A (0.2)	A (0.2)	A (0.6)	A (0.6)	A (0.2)	A (0.6)	A (0.6)	YES
	P.M.	A (0.1)	A (0.1)	A (1.4)	A (1.4)	A (0.1)	A (1.5)	A (1.5)	YES
S. Market Street (SR 0114) & Proposed Right-Out Only Site Driveway	A.M	--	--	A (0.0)	--	--	A (0.0)	--	YES
	P.M	--	--	A (0.0)	--	--	A (0.0)	--	YES

Base = No-Build scenario
Projected = Build scenario
Unsignalized ILOS calculated in accordance with Figure 5 of Policies and Procedures for Transportation Impact Studies.
[1] Projected conditions with implementation of recommended improvements

INTRODUCTION

Traffic Planning and Design, Inc. (TPD) has completed a Transportation Impact Study (TIS) for the proposed S. Market Street Office Building development in Upper Allen Township, Cumberland County, Pennsylvania. As shown in **Figure 1**, the project site is located on the northwest corner of the intersection of S. Market Street (SR 0114) & Gettysburg Pike (T-621). As shown in **Figure 2**, the proposed development will consist of a 10,000 square-foot medical office building and a 24,888 s.f. general office building at full build-out.

This report has been prepared in accordance with PennDOT's *Policies and Procedures for Transportation Impact Studies*, found in PennDOT's *Publication 282*, Appendix A, dated July 2017. In addition, the report has been prepared in accordance with Section 220-11 (Reports) of Upper Allen Township's Subdivision and Land Development Ordinance. The project scope and the extent of the study area were confirmed with representatives of PennDOT and Township staff at a meeting on January 23, 2019. All relevant correspondence pertaining to this project has been included in **Appendix A**.

Site Access Locations

Access for the development is proposed via one full-movement driveway to S. Market Street (SR 0114), directly opposite the Country and Town Baptist Church Driveway and one Right-Out Only driveway to S. Market Street (SR 0114) approximately ~250' further west.

EXISTING ROADWAY NETWORK

A field review of the existing roadway system in the study area was conducted. The existing roadway characteristics within the study area are summarized in **Table 1**. Photographs of the study area intersections are included in **Appendix B**.

TABLE 1
ROADWAY CHARACTERISTICS WITHIN STUDY AREA

Roadway	Ownership	Functional Classification/ Roadway Type	Predominant Directional Orientation	Average Daily Traffic	Posted Speed Limit
S. Market Street	State (SR 0114)	Urban Minor Arterial	East-West	8,840	40 mph
Gettysburg Pike	Township (T-621)	Urban Collector	North-South	4,598	25 mph

Land Use Context

In Chapter 4 of the *Smart Transportation Guidebook*, dated March 2008, there is guidance pertaining to defining the land use context(s) for a given area. Based upon review of this information, the land uses surrounding the proposed site best fits the Suburban Neighborhood designation, as described below:

> ***Suburban Neighborhood***, *"predominately low density residential communities… typically arranged in a curvilinear internal system of streets with limited connections to regional road network or surrounding streets. . . .Neighborhoods can include community facilities such as schools, churches, recreational facilities, and some other stores and offices. When suburban houses line and arterial roadway but have their primary access to frontage roads or rear access roads, it is possible to classify this area as a suburban corridor."*

Roadway Type

In Chapter 5 of the *Smart Transportation Guidebook*, there is guidance pertaining to defining the transportation context(s) for a given area. Comparing the existing condition roadway characteristics to the various options presented in Table 5.1 of the *Smart Transportation Guidebook*, the study area roadways best fit the following categories, as described below:

Community Arterial, traffic volumes of 5,000 to 25,000 vehicles per day, intersection spacing of 300 to 1,320 feet, a desired operating speed of 25-55 mph, and a description as follows: *"often classified as Minor Arterial in traditional classification but may include road segments classified as Principal Arterial."*

- S. Market Street (SR 0114).

Neighborhood Collector, traffic volumes of <6,000 vehicles per day, intersection spacing of 300 to 660 feet, a desired operating speed of 25-35 mph, and a description as follows: *"similar in appearance to local roadways. Typically classified as Minor Collector."*

- Gettysburg Pike (T-621).

Bicycle and Pedestrian Facilities

Based on observations at the study area intersections, there are no sidewalks or other pedestrian or bicycle facilities on S. Market Street or Gettysburg Pike in the vicinity of the site.

Mass Transit Facilities

Mass transit is not available in the study area.

Crash Data Investigation

Crash data were obtained from PennDOT for the study area intersections. PennDOT defines a reportable crash as follows, "A reportable (crash) is one in which an injury or fatality occurs or if at least one of the vehicles involved requires towing from the scene." Reportable crashes were tabulated for the five-year time period beginning 01/01/2013 and ending 12/31/2017. For a given intersection, PennDOT considers a crash occurrence of 5 reportable, correctable crashes over a continuous twelve-month period during the past five years to be a threshold value, above which the intersection design should be reviewed to examine if corrective measures can be taken to enhance safety. In accordance with typical PennDOT policy the crash data investigation was provided for their review under separate cover.

EXISTING TRAFFIC CONDITIONS

Manual Turning Movement Counts

Manual traffic counts were conducted in 15-minute intervals during the weekday morning (6:00 to 9:00 A.M.) and weekday evening (3:00 to 6:00 P.M.) peak periods. Data pertaining to heavy vehicles, pedestrians and transit vehicles were observed during the manual counts. Peak hours and count dates for the study area intersections are identified in **Table 2**.

TABLE 2
MANUAL TRAFFIC COUNT INFORMATION

Intersection	Date of Traffic Counts	Time Period	Intersection Peak Hour[1]
S. Market Street & Gettysburg Pike[2,4]	Thursday, March 9, 2017	Weekday A.M	7:00 to 8:00 A.M.
		Weekday P.M[3]	5:00 to 6:00 P.M.
Gettysburg Pike & Country and Town Baptist Church Driveway	Thursday, August 23, 2018	Weekday A.M	7:15 to 8:15 A.M.
		Weekday P.M	5:00 to 6:00 P.M.

[1]Peak Hour consists of the four consecutive 15-minute intervals where the highest traffic volumes occur.
[2]Counts conducted by Alpha Consulting Engineers, Inc.
[3]P.M. Counts were conducted from 3:00 P.M. – 7:00 P.M.
[4]Right Turn on Red Data calculated using TPD counts conducted in 2015

Existing condition traffic volumes for the weekday A.M. and weekday P.M. peak hours are illustrated in **Figures 3 and 4**. Turning movements into/out of the existing Church Driveway were counted during the peak time periods and through movement volumes at the two intersections were balanced as there are no other developments present in between them. Manual traffic count data sheets are provided in **Appendix C**.

Average Daily Traffic

The existing Average Daily Traffic (ADT) volumes are based data obtained from PennDOT's Traffic Information Repository (TIRe) website. The traffic volume map contained on the PennDOT iTMS website was reviewed in April 2019 to determine the Average Daily Traffic (ADT) for a typical weekday along the State-maintained roadways in the vicinity of the proposed site.

BASE (NO-BUILD) CONDITIONS

Annual Background Growth

In order to develop future base (no-build) traffic volumes, a background growth factor was developed based on growth rates obtained from the PennDOT Bureau of Planning and Research (BPR). A background growth rate of 0.80% per year is recommended for urban non-interstate roadways in Cumberland County. As such, the background growth factor was applied annually to yield overall growth percentages of 2.42% (0.80% per year, compounded over 3 years) for the 2020 opening year and 10.91% (0.80% per year, compounded over 13 years) for the 2030 design year.

Nearby Proposed Developments

Base (no-build) traffic conditions were calculated to include traffic volumes from proposed developments, which, though not operating under existing conditions, may be operating by the opening year (2020) and design year (2030) of the proposed development. The following nearby planned development was specifically included in this study:

Loudoun Tract is a proposed mixed-use development consisting of an existing pharmacy, a bank, hotel and office space. The site is located on the east side of Gettysburg Pike, just south of English Drive. TPD calculated the trip generation for this development based on ITE Trip Generation Manual 10th Ed. methodologies while trip distributions were based on data provided in Barry Isett & Associates Inc.'s *Traffic Analysis for Loudoun Centre*, dated March 21, 2006.

Base condition volumes for the weekday A.M. and weekday P.M. peak hours are illustrated in **Figures 5 and 6** for the 2020 opening year conditions and **Figures 7 and 8** for the 2030 design year conditions. Trip generation and distribution calculations for the nearby development are provided in **Appendix D**.

PROPOSED SITE ACCESS

Access for the development is proposed via one full-movement driveway to S. Market Street (SR 0114), directly opposite the Country and Town Baptist Church Driveway and one Right-Out Only driveway to S. Market Street (SR 0114) approximately ~250' further west.

Sight Distance Analysis

A sight distance analysis was prepared for the proposed site driveways. In general, recommended safe sight distances depend upon the posted speed limit and roadway grades. The existing sight distances at the proposed driveways were measured in accordance with PennDOT Publication 282 Highway Occupancy Permit Guidelines and compared to PennDOT's desirable sight distance standard, which is identified in 67 PA Code Chapter 441.8(h), "Access to and Occupancy of Highways by Driveways and Local Roads." In addition, measured sight distances at the proposed driveways were compared to PennDOT's safe stopping sight distance standard, which is calculated by the following equation:

$$\mathbf{SSSD = 1.47VT + V^2/[30(f \pm g)]}$$

SSSD = safe stopping sight distance (acceptable sight distance)
V = Vehicle Speed
T = Perception Reaction Time of Driver (2.5 seconds)
f = Coefficient of Friction for Wet Pavements
g = Percent of Roadway Grade Divided by 100

Table 3 show the measured sight distances, desirable sight distances, and acceptable (SSSD) sight distances at the site driveway for vehicles entering and exiting the site.

TABLE 3
SIGHT DISTANCE ANALYSIS

Proposed Full-Movement Driveway to S. Market Street (SR 0114)						
	Direction	Posted Speed	Grade[1]	Sight Distances (feet)		
				DES	SSSD	EXIST
Exiting Movements	To the left	40 mph	+4%	538	295	**600+**
	To the right	40 mph	-4%	460	338	**500+**[2]
Entering Left Turns	Approaching same direction	40 mph	-4%	--	338	**400+**
	Approaching opposite direction	40 mph	+4%	373	295	**600+**
Proposed Right-Out Only Driveway to S. Market Street (SR 0114)						
	Direction	Posted Speed	Grade[1]	Sight Distances (feet)		
				DES	SSSD	EXIST
Exiting Movements	To the left	40 mph	+5%	538	291	**600+**[2]

SSSD = PennDOT Acceptable Sight Distance
DES = PennDOT Desirable Sight Distance
EXIST = Existing (Measured) Sight Distance

[1] *Roadway Grade Approaching Driveway*
[2] *With removal of embankment along site frontage*

As shown in **Table 3**, the measured sight distances at the site driveway intersections exceed the applicable PennDOT sight distance requirements with removal of the existing embankment along the site frontage.

TRIP GENERATION

The trip generation equations for the proposed development were obtained from the *Trip Generation Manual*, 10th Edition, an Institute of Transportation Engineers (ITE) Informational Report. The statistics in *Trip Generation Manual* are empirical data based on more than 6,500 trip generation studies. The data are categorized by Land Use Codes, with total vehicular trips for a given land use estimated using an independent variable and statistically generated rates or equations.

For the proposed medical office building, Land Use Codes 710 (General Office Building) and 720 (Medical-Dental Office Building) from the *Trip Generation Manual* was used to calculate the number of vehicular trips the development will generate during the following time periods: (1) average weekday; (2) weekday A.M. peak hour; and (3) weekday P.M. peak hour. **Table 4** shows the trip generation equations and directional split for the analyzed time periods.

TABLE 4
ITE TRIP GENERATION DATA

Land Use	ITE #	Time Period	Equations/ Rates	Directional Splits	
				Enter %	Exit %
Medical-Dental Office Building	720	Average Weekday	T = 38.42*(X)-87.62	50%	50%
		A.M. Peak Hour	Ln(T) = 0.89*(X)+1.31	78%	22%
		P.M. Peak Hour	T = 3.39*(X)+2.02	28%	72%
General Office Building	710	Average Weekday	T = 9.74*(X)	50%	50%
		A.M. Peak Hour	T = 1.16*(X)	86%	14%
		P.M. Peak Hour	T = 1.15*(X)	16%	84%

T = number of site-generated vehicular trips
X = independent variable (1,000 s.f. gross floor area)

The calculated trip generation for the proposed development for the full build-out condition is shown in **Table 5**. For the purposes of this study, TPD assumed the site would be constructed and fully built-out in the opening year of 2020.

TABLE 5
TRIP GENERATION SUMMARY

Land Use	Driveway Trips		
	Total	Enter	Exit
Average Weekday			
Medical Office Building	296	148	148
General Office Building	242	121	121
Total	538	269	269
Weekday A.M. Peak Hour			
Medical Office Building	29	23	6
General Office Building	29	25	4
Total	58	48	10
Weekday P.M. Peak Hour			
Medical Office Building	36	10	26
General Office Building	29	5	24
Total	65	15	50

Based on the trip generation analysis summarized in **Table 5**, the proposed site will generate approximately 58 new vehicle-trips during the weekday A.M peak hour and 65 new vehicle-trips during the weekday P.M peak hour.

TRIP DISTRIBUTION

The distribution of trips generated by the proposed development was based on the following: (1) a gravity model based on where workers within the area reside with consideration given to the location of existing residential neighborhoods and (2) site driveway locations and configurations.

The new vehicle trips for the proposed development were distributed to the local roadway network based on the percentages shown in **Table 6**.

TABLE 6
TRIP DISTRIBUTION PERCENTAGES – NEW TRIPS

Direction - To/From	Assignment (To/From)	Distribution Percentage
East	via S. Market Street	65%
West	via S. Market Street	15%
North	via Gettysburg Pike	5%
South	via Gettysburg Pike	15%

The assignment of site-generated trips for the proposed development during the weekday A.M. and weekday P.M. peak hours are shown in **Figures 9 and 10**, respectively. The trip distribution and assignment percentage information is included in **Appendix E**.

PROJECTED (BUILD) CONDITION TRAFFIC VOLUMES

The site-generated trips for the proposed medical office building were added to the 2020 and 2030 base (no-build) condition traffic volumes to calculate the 2020 and 2030 projected (build) condition traffic volumes. Projected condition traffic volumes are shown in **Figures 11 and 12** for the 2020 opening year and are shown in **Figures 13 and 14** for the 2030 design year for the weekday A.M. and weekday P.M. peak hours.

Traffic volume development worksheets for the study area intersections are provided in **Appendix F**.

LEVELS OF SERVICE FOR AN INTERSECTION

For analysis of intersections, level of service is defined in terms of delay, which is a measure of driver discomfort and frustration, fuel consumption, and lost travel time. LOS criteria is stated in terms of control delay per vehicle for a one-hour analysis period. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The criteria are shown in **Table 7**. Delay, as it relates to level of service, is a complex measure and is dependent upon a number of variables. For signalized intersections, these variables include the quality of vehicle progression, the cycle length, the green time ratio, and the volume/capacity ratio for the lane group in question. For unsignalized intersections, delay is related to the availability of gaps in the flow of traffic on the major street and the driver's discretion in selecting an appropriate gap for a particular movement from the minor street (straight across, left or right turn).

TABLE 7
LEVEL OF SERVICE CRITERIA
UNSIGNALIZED AND SIGNALIZED INTERSECTIONS [1]

Level of Service	Control Delay Per Vehicle (Seconds)	
	Signalized	Unsignalized
A	< 10	< 10
B	> 10 and < 20	> 10 and < 15
C	> 20 and < 35	> 15 and < 25
D	> 35 and < 55	> 25 and < 35
E	> 55 and < 80	> 35 and < 50
F	> 80 or v/c > 1.0	> 50 or v/c > 1.0

[1] *Obtained from Exhibits 18-4 and 19-1 of the Transportation Research Board's Highway Capacity Manual 2010*

CAPACITY ANALYSIS METHODOLOGY

Capacity analyses were conducted for the weekday A.M. and weekday P.M. peak hours at the study area intersections. These analyses were conducted according to the methodologies contained in the 2010 *Highway Capacity Manual* (HCM) using *Synchro 10* software (Version 10.3, Build 55, Revision 0), a Trafficware product.

The following conditions were analyzed, as applicable:

- Existing conditions;
- 2020 base conditions (Build-out year without development);
- 2020 projected conditions (Build-out year with full build-out of development);
- 2030 base conditions (Design year without development);
- 2030 projected conditions (Design year with development).

The following items should be noted with respect to the capacity analyses:

- The Pennsylvania default values for the suburban land use context contained in Chapter 10 of PennDOT's Publication 46 were utilized for the base saturation flow rate, start-up lost time, extension of effective green time and number of left turn sneakers, at all signalized intersections.
- The Pennsylvania default values for the suburban land use context contained in Chapter 10 of PennDOT's Publication 46 were utilized for the base critical headway and base follow-up headways at unsignalized intersections.

In addition, capacity analyses were conducted at the proposed site driveway intersection under the 2020 and 2030 projected conditions. The capacity analysis worksheets are included in **Appendix G**. The PennDOT-approved signal plans are included in **Appendix J**.

PennDOT's Transportation Impact Study Guidelines outlined in PennDOT's *Policies and Procedures for Transportation Impact Studies*, found in PennDOT's Publication 282, Appendix A, dated July 2017 contain the following criteria regarding levels of service:

- Page 29 of the Guidelines state that if evaluation of the With Development Horizon Year Scenario to the Without Development Horizon Year Scenario indicates that the overall intersection level of service has dropped, the applicant will be required to mitigate the level of service if the increase in overall intersection delay is greater than 10-seconds. If the overall intersection delay increase is less than or equal to 10-seconds, mitigation of the intersection will not be required.
- Page 29 of the Guidelines state that for mitigation scenarios, applicants are expected to mitigate the overall intersection LOS to the original Without Development LOS; the 10-second delay variance is not applied to mitigation scenarios. Applicants may be required to address available storage and queue lengths at critical movements or approaches even if the overall LOS requirements are met.
- Page 31 of the Guidelines state that if signalization is the preferred alternative for mitigation, overall intersection LOS C in rural areas and LOS D in urban areas is acceptable.
- Page 31 of the Guidelines states new signalized or unsignalized intersection established to serve as access to the development shall be designed to operate at minimum LOS C for rural areas, and minimum LOS D for urban areas.

LEVELS OF SERVICE IN THE STUDY AREA

Level of service (LOS) matrices for the study area intersections are shown in **Tables 8 and 9** for the weekday A.M. and weekday P.M. peak hours, respectively. Per PennDOT standards, the signal timings at the signalized study area intersections have been optimized under base conditions and projected conditions.

TABLE 8
LEVEL OF SERVICE DELAY (SECONDS) SUMMARY
WEEKDAY A.M. PEAK HOUR

Intersection	Movement	Existing Conditions	2020 Opening Year			2030 Design Year		
			Base	Projected	Projected[1]	Base	Projected	Projected[1]
S. Market Street (SR 0114) & Gettysburg Pike (T-621)	EB L	B	B	B	B	B	B	C
	EB T	C	C	C	C	C	C	B
	EB R				B			B
	WB L	B	B	B	B	B	B	B
	WB T	D	D	F (66.9)	D	F (78.3)	F (97.5)	D
	WB R	B	B	B	B	B	B	B
	NB L	C	C	C	C	C	C	D
	NB T/R	E	F (113.4)	F (113.4)	F (185.5)	F (154.8)	F (154.8)	F (285.9)
	SB L	C	C	C	D	C	C	D
	SB T/R	C	C	C	D	C	C	D
	ILOS	**D (36.9)**	**D (46.0)**	**D (50.7)**	**D (53.5)**	**E (61.2)**	**E (67.5)**	**E (66.9)**
S. Market Street (SR 0114) & Country and Town Baptist Church Driveway/ Proposed Site Driveway	EB L	--	--	B	B	--	B	B
	WB L	A	A	A	A	B	A	A
	NB L/T/R	C	C	C	C	C	C	C
	SB L/T/R	--	--	E	E	--	E	E
	ILOS	**A (0.2)**	**A (0.2)**	**A (0.6)**	**A (0.6)**	**A (0.2)**	**A (0.6)**	**A (0.6)**
S. Market Street (SR 0114) & Proposed Right-Out Only Driveway	SB R	--	--	C	--	--	C	--
	ILOS	**--**	**--**	**A (0.0)**	**--**	**--**	**A (0.0)**	**--**

Base = No-Build scenario; Projected = Build scenario
[1] Projected conditions with implementation of recommended improvements
ILOS = Overall Intersection Level of Service
Unsignalized ILOS calculated in accordance with Figure 5 of Policies and Procedures for Transportation Impact Studies

TABLE 9
LEVEL OF SERVICE DELAY (SECONDS) SUMMARY
WEEKDAY P.M. PEAK HOUR

Intersection	Movement	Existing Conditions	2020 Opening Year			2030 Design Year		
			Base	Projected	Projected[1]	Base	Projected	Projected[1]
S. Market Street (SR 0114) & Gettysburg Pike (T-621)	EB L	B	B	B	B	B	B	B
	EB T	C	C	C	C	C	D	C
	EB R				B			B
	WB L	B	B	C	B	C	C	C
	WB T	B	B	B	C	C	C	C
	WB R	B	B	B	B	B	B	B
	NB L	C	C	C	C	C	C	C
	NB T/R	D	D	D	D	D	D	D
	SB L	C	C	C	C	D	D	C
	SB T/R	D	D	D	D	D	D	D
	ILOS	**C (26.1)**	**C (27.8)**	**C (28.8)**	**C (26.5)**	**C (31.0)**	**C (32.8)**	**C (28.6)**
S. Market Street (SR 0114) & Country and Town Baptist Church Driveway/ Proposed Site Driveway	EB L	--	--	A	A	--	A	A
	WB L	A	B	B	B	B	B	B
	NB L/T/R	B	B	C	C	C	C	C
	SB L/T/R	--	--	D	D	--	E	E
	ILOS	**A (0.1)**	**A (0.1)**	**A (1.4)**	**A (1.4)**	**A (0.1)**	**A (1.5)**	**A (1.5)**
S. Market Street (SR 0114) & Proposed Right-Out Only Driveway	SB R	--	--	B	--	--	B	--
	ILOS	**--**	**--**	**A (0.0)**	**--**	**--**	**A (0.0)**	**--**

Base = No-Build scenario; Projected = Build scenario
[1] Projected conditions with implementation of recommended improvements
ILOS = Overall Intersection Level of Service
Unsignalized ILOS calculated in accordance with Figure 5 of Policies and Procedures for Transportation Impact Studies

As shown in **Tables 8 and 9**, under the 2020 and 2030 projected conditions with the development of the proposed site and construction of the recommended roadway improvements, all overall levels of service at the study area intersections comply with the requirements outlined in PennDOT's TIS Guidelines.

95TH PERCENTILE QUEUE ANALYSIS

Queue analyses were conducted at the study area intersections using *Synchro 10* software. For this analysis, the 95th percentile queue is defined as the queue length that is exceeded in 5% of the signal cycles. As an example, for a signal with a 90-second cycle, this means that the 95th percentile queue length will be exceeded during 2 of the 40 signal cycles that occur during the peak hour. The queue analysis results are summarized in **Table 10** for the analyzed peak hours.

TABLE 10
95TH PERCENTILE QUEUE SUMMARY (FEET)
2030 DESIGN YEAR

Intersection	Lane Group	Existing/ **Proposed** Storage Length	Weekday A.M.			Weekday P.M.		
			Base	Proj.	Proj.[1]	Base	Proj.	Proj.[1]
S. Market Street (SR 0114) & Gettysburg Pike (T-621)	EB L	180	29/28	29/28	27/30	38/35	39/35	38/35
	EB T	1000+	399/390	409/398	295/323	538/450	593/505	380/363
	EB R	--/**225**			0/38			12/68
	WB L	225	83/88	89/90	72/88	264/160	278/178	182/163
	WB T	495	611/835	652/983	597/690	262/250	270/258	265/263
	WB R	205	4/55	4/55	11/55	43/105	43/108	42/108
	NB L	135	121/153	125/163	157/83	74/75	75/78	77/78
	NB T/R	1000+	345/623	345/623	477/890	257/260	257/260	280/270
	SB L	150	51/55	51/55	67/75	193/188	193/188	192/178
	SB T/R	1000+	63/123	63/128	94/173	207/228	211/230	241/225
S. Market Street (SR 0114) & Country and Town Baptist Church Driveway/ Proposed Site Driveway	EB L	--/	--/--	--/0	--/0	--/--	--/0	--/0
	WB L	--/	--/0	--/0	--/0	--/0	--/0	--/0
	NB L/T/R	--/**50+**	--/5	--/8	--/8	--/3	--/3	--/3
	SB L/T/R	50+	--/--	--/8	--/8	--/--	--/33	--/33
S. Market Street (SR 0114) & Proposed Right-Out Only Driveway	SB R	--/**50+**	--/--	--/0	--/--	--/--	--/0	--/--

[1]Full build-out scenario of development with improvements recommended in this TIS
[2]Distance to adjacent intersection
X/Y = Synchro/HCM 6th Ed.

As shown in **Table 10**, all of the projected condition queues will be accommodated within the projected storage length or comparable to the base (no-build) conditions. Queue analysis worksheets are included with the capacity analysis worksheets provided in **Appendix G**.

AUXILIARY TURN LANE ANALYSIS

TPD evaluated auxiliary turn lane warrants at the proposed site driveway with S. Market Street (SR 0114). In addition, warrants were evaluated for the proposed eastbound right-turn lane on S. Market Street (SR 0114) approaching Gettysburg Pike based upon the warrant analysis methodology contained within Chapter 11 of PennDOT's *Publication 46*, Section 11.17. The findings are summarized in **Table 11**. The auxiliary turn lane warrant analysis worksheets are contained in **Appendix H**.

TABLE 11
AUXILIARY TURN LANE ANALYSIS SUMMARY

Intersection	Auxiliary Lane	Warrant Satisfied?		Required Lane Length	Proposed Lane Length
		AM	PM		
S. Market Street (SR 0114) & Gettysburg Pike (T-621)	EB Right-Turn Lane	No	Yes	225'	225'
S. Market Street (SR 0114) & Proposed Site Driveway	EB Left-Turn Lane	Yes	No	75'	75'
	WB Right-Turn Lane	Yes	No	75'	75'

Based on this analysis, an eastbound left-turn lane and a westbound right-turn lane is warranted at the intersection of S. Market Street (SR 0114) and Church Driveway/Proposed Site Driveway. In addition, based on the above methodology a 225' of storage is recommended for the proposed eastbound right-turn lane on S. Market Street (SR 0114) approaching Gettysburg Pike.

GAP STUDY

TPD conducted gap studies at the intersection of S. Market Street (SR 0114) and Church Driveway/Proposed Site Driveway. In order to evaluate gaps, TPD measured gaps using data collected during the Tuesday, April 9, 2019 AM and PM peak hour traffic counts at the subject intersection.

The results of the gap analysis are provided in **Table 12** below:

TABLE 12
GAP STUDY

Intersection	Time Period	Existing Capacity for Left Turns[1]	2030 SB Left Turn Volume from Side Street[2]
S. Market Street (SR 0114) & Country and Town Baptist Church Driveway/ Proposed Site Driveway	AM Peak Hour	272	8
	PM Peak Hour	306	42

[1]Number of gaps on S. Market Street (SR 0114) that exceed required gap time to accomplish left turn movement from minor street
[2]SB left turn movement from Proposed Site Driveway

As shown in **Table 12**, there are adequate gaps in the S. Market Street (SR 0114) traffic stream to allow left turn movements from the Proposed Site Driveway during the 2030 weekday AM and PM peak hours. Gap study worksheets are provided in **Appendix I**.

RECOMMENDATIONS AND CONCLUSIONS

The recommendations and conclusions for this Transportation Impact Study are identified in the Executive Summary.

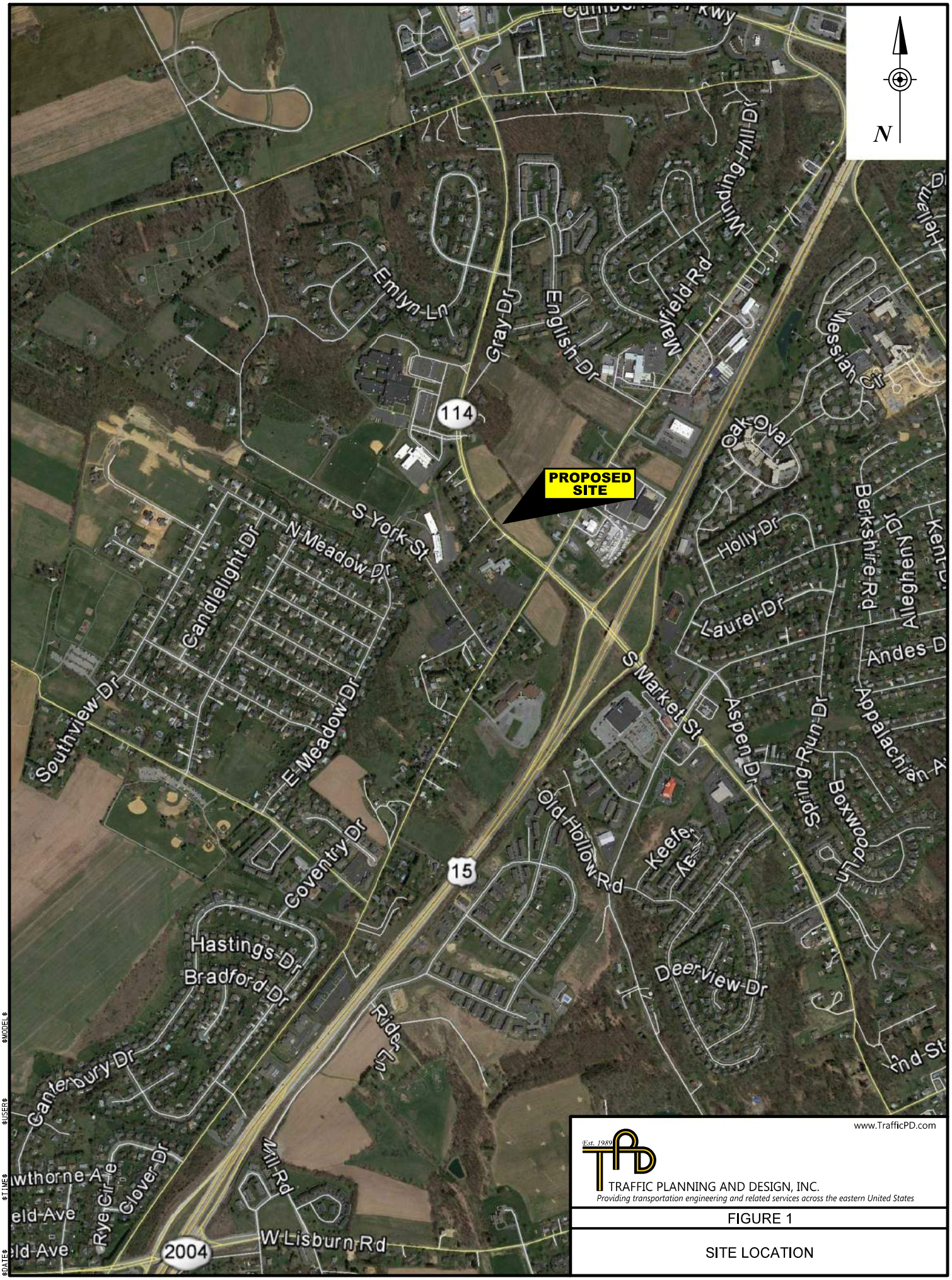


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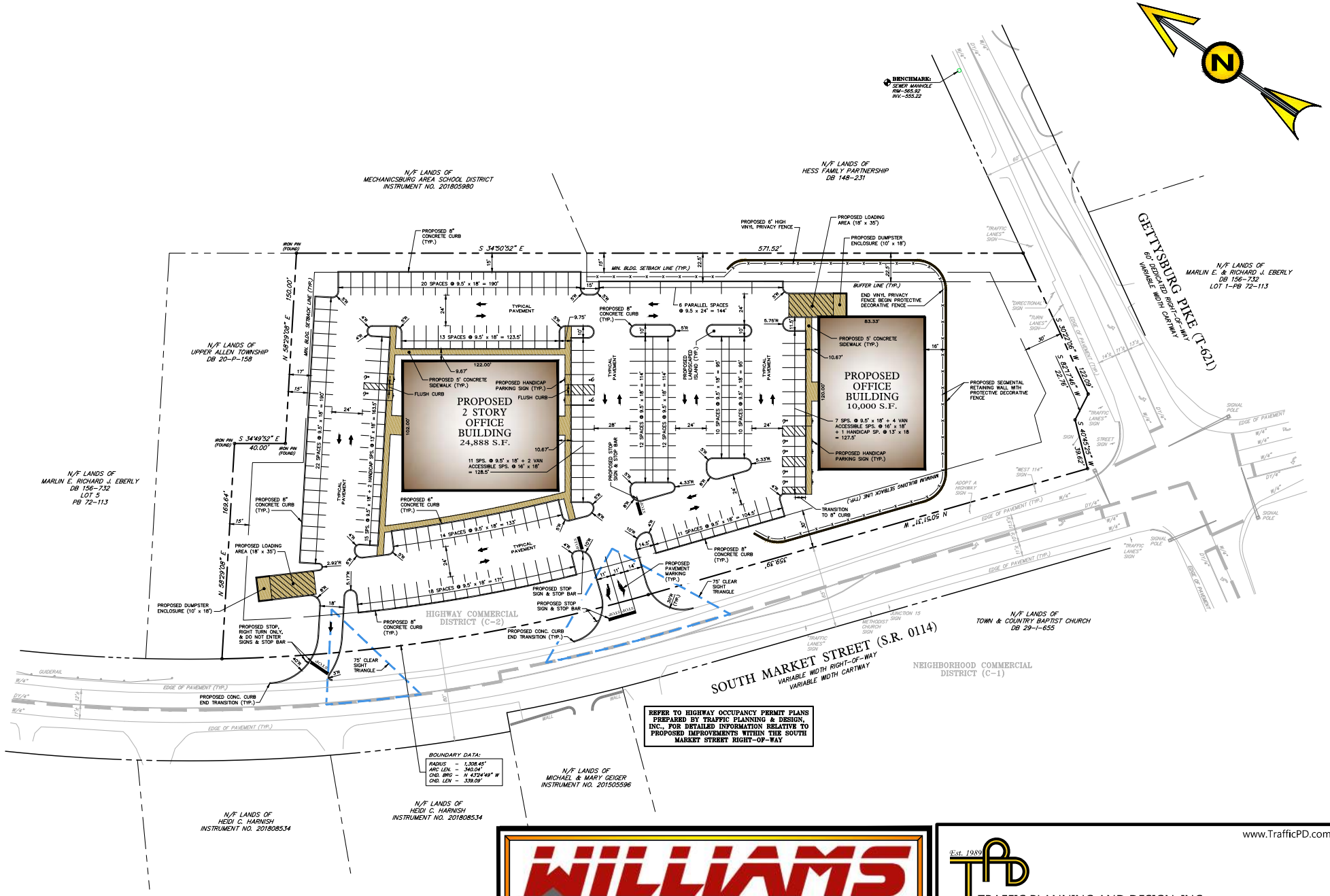
FIGURE 1

SITE LOCATION

$MODEL$ $USER$ $TIME$ $FILE$ $DATE$

$FILE$
$DATE$ $TIME$ $USER$ $MODEL$



KEY:

- - - - - - PROPOSED DRIVEWAY

WILLIAMS SITE CIVIL, LLC
WE ENGINEER SAVINGS
2325 PAXTON CHURCH ROAD
HARRISBURG, PA 17110
PH: 717-412-0142
FAX: 717-540-7958

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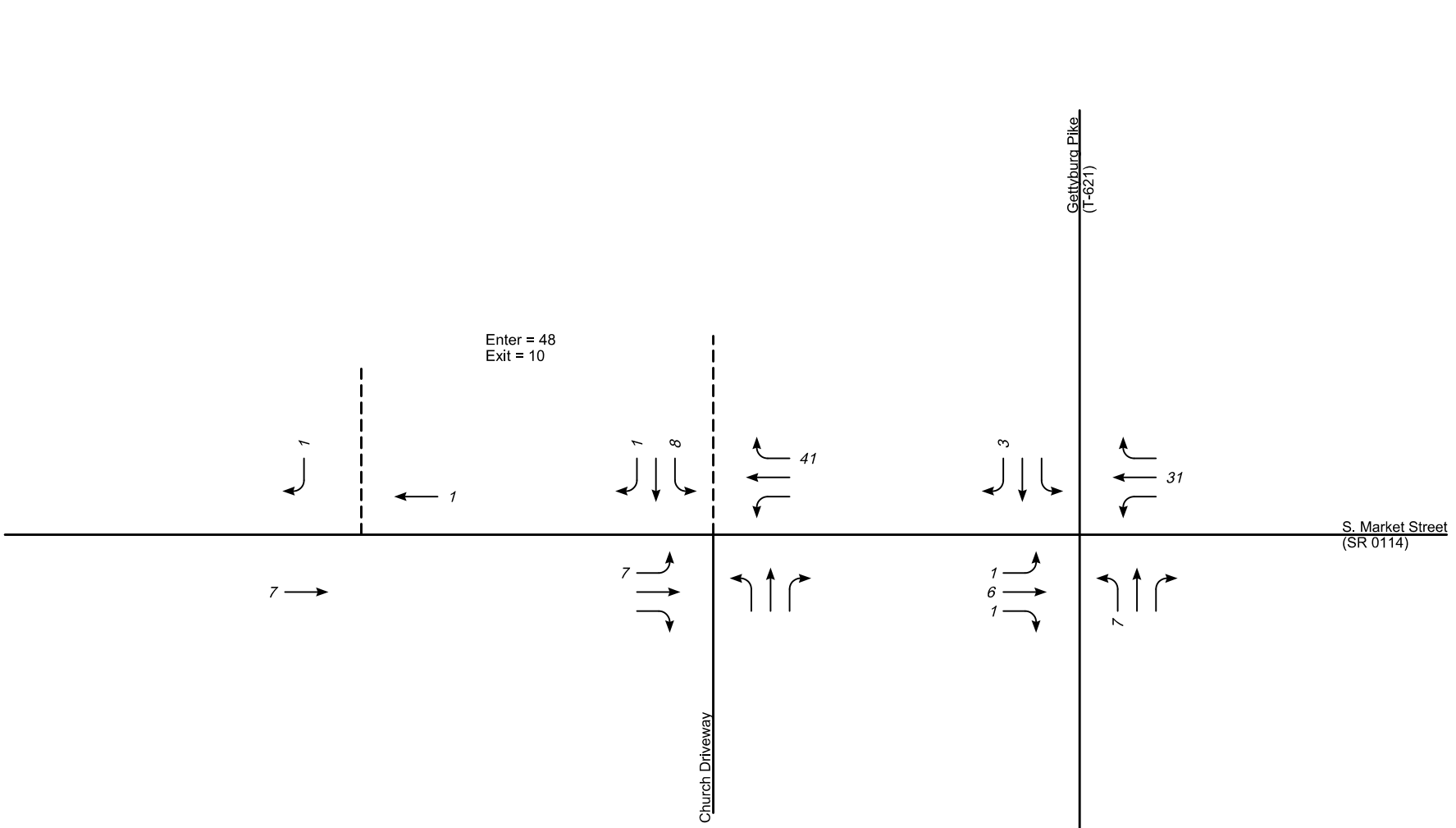
FIGURE 2

SITE PLAN

$FILE$
$DATE$ $TIME$ $USER$ $MODEL$



KEY:

– – – – – PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

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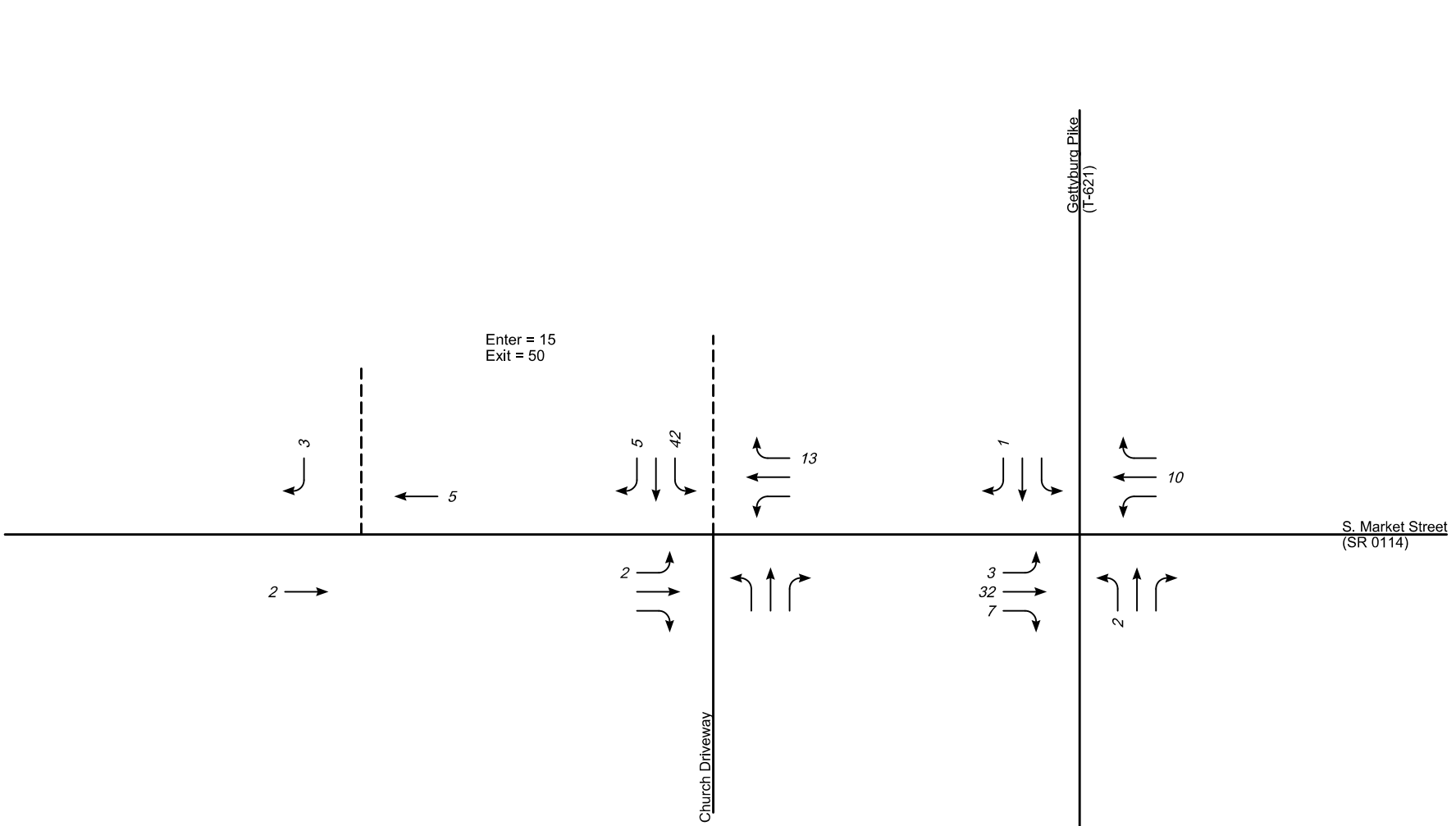
FIGURE 9

S. MARKET STREET OFFICE BUILDING
WEEKDAY A.M. PEAK HOUR
TRIP DISTRIBUTION AND ASSIGNMENT

$FILE$
$DATE$ $TIME$ $USER$ $MODEL$



KEY:

– – – – – PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

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FIGURE 10

S. MARKET STREET OFFICE BUILDING
WEEKDAY P.M. PEAK HOUR
TRIP DISTRIBUTION AND ASSIGNMENT

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
8-0	CUMBERLAND	0141	--	1 of 1
	UPPER ALLEN TOWNSHIP			

REVISION NUMBER	REVISIONS	DATE	BY

PROPOSED 2 STORY OFFICE BUILDING

PROPOSED OFFICE BUILDING

GETTYSBURG PIKE (T-621)
POSTED SPEED LIMIT 25 MPH

S. MARKET STREET (SR 0114)
POSTED SPEED LIMIT 40 MPH

18'

14' 11' 14'

75' RIGHT TURN LANE

75' BAY TAPER

220' TRANSITION TAPER

75' BAY TAPER

75' LEFT TURN LANE

75' BAY TAPER

225' RIGHT TURN LANE

50' R

150' R

Gettysburg P

0 40 80 FEET

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DATE: 11/28/18 | PROJECT DESIGNER: DIN | JOB NO: WMSC.00005

CONCEPTUAL LAYOUT

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DRN BY: DIN

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02/14/19 14:12:25 1:480 efoster